AMERICAN BEE JOURNAL.

EDITED AND PUBLISHED BY SAMUEL WAGNER, WASHINGTON, D. C.

AT TWO DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

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The Egyptian, the Grecian, the Italian and the Common Bee.

Translated for the American Bee Journal.

At the late general convention of German bee-keepers, in Nuremburg, Mr. Vogel, of Lehmanshöfel, stated as the result of his experiments and observations that, in his judgment, the common and the Egyptian bees are what he designates as *primary* races, while the Italian and the Grecian are merę varieties, or breeds produced by crossing the two primary races.

I am not myself acquainted with the Egyptian bee, but from the Greek and Roman classics and the known source and course of civilization in ancient times, I had, long before I saw Mr. Vogel's remarks, come to the conclusion that the Italian bee is simply a cross between the Grecian bee and the native or common bee of Italy, and that the latter was probably essentially the same as our common black bee. Again, I conceived that the Grecian bee was itself a cross between the Egyptian bee and the native bee of Greece, which presumably also did not differ much in appearance and habits from our common black bee.

There is no doubt that the Romans derived their knowledge of practical bee-culture from the Greeks. Varro, Virgil, Columella, Pliny and Palladius, knew little about bees which they did not learn or copy from Aristotle. But the Greeks surpassed the Romans, not only in science and theory, but in practice also. Hence, honey procured from Athens, from the Grecian archipelago, and from Sicily—which, like the whole of southern Italy, was populated by Greek colonists—came to be regarded by the discriminating taste of the Roman epicure as much superior to any other. What wonder then, since dainties were prized, sought for, and liberally paid for in the Roman capital, if Grecian bees were early transported to Italy, and that special pains were taken there to preserve in its purity a race believed to produce a honey finer in quality and sure to be more remunerative in price.

The Greeks, on the other hand, derived their culture and civilization mainly from Egypt. Think of Danaus in Argos, and Cecrops in Athens; remember the similarity of the mythology and religious culture of the two countries, and call to mind the active commercial intercourse early and long subsisting between the chief cities of Greece and the port of Alexandria; consider the fact too that the Grecian myths and traditions refer the introduction of the honey bee from the island of Crete, fronting the coast of Egypt, and that, in the most ancient records of Greece, the superstition which ascribes the origin of bees to the putrefying carcass of an ox or a heifer, is clearly traceable to Egyptian sources, and the striking circumstance, also, that an imposture so egregious, which none but a crafty deceiver could have devised to gull gaping credulity, was fully believed by the then most highly cultivated people on earth, and it becomes evident enough that the Greeks regarded the Egyptians as unimpeachable authority in all that relates to bee culture.

Hence, though it is nowhere expressly stated that the Greeks crossed their native bees with such as were imported from Egypt, or that the Romans carried the *improved* race from Greece to Italy, we can hardly avoid assuming that, in the ordinary course of events, such was the fact, and Mr. Vogel may well regard it as a confirmation of his deductions and views, though thus elaborated by a different process.

More assured certainty as to this might perhaps be attainable could we compare the Egyptian and the Grecian bees with the description of the honey bee—native or foreign—as it is given to us by the Roman and the Greek writers respectively. Perhaps Mr. Vogel has already in store, as the result of his investigations and observations, the requisite material for such a comparison. If so, he would contribute greatly to the further and more satisfactory elucidation of this interesting topic, by communicating it for publication.

SEEMAN.

Neisse, January, 1870.

The field on which bees are fed is no whit the barer for their biting. When they have took in their full repast of flowers or grasses the ox may graze and the sheep may fatten on their reversions.—*Purchas.*

The Past and the Future.

Translated for the American Bee Journal.

At the opening not only of a new volume but on the twenty-fifth anniversary of the establishment of the Bienenzeitung, the editor and his respected correspondents may well look back with gratification on the results attained by their conjoint labors. During the period just elapsed bee-culture has been advanced both in theory and in practice, more than in centuries previously. Specially important for theory are the truths evolved by investigation and amid manifold controversies. When the Bienenzeitung was started many important points were still involved in obscurity and doubt. The origin and fertilization of the queen; the origin, purpose and sex of the drones; and the existence of fertile workers, were all still subjects of debate and controversy, and opinions or notions regarding them were entertained and advanced, of which the veriest tyro in bee-culture would now feel ashamed, since the truth has been so clearly elucidated. The change became possible only when by the publication of the Bienenzeitung a medium was provided through which the observations of numerous careful investigators could be made common property, and a general interchange of sentiments effected among bee-keepers. If the Italian bee has contributed greatly to dispel the darkness in which many points were shrouded, to the Bienenzeitung still pertains the credit of having first directed attention to the fact that the yellow-banded bee might be used for many interesting and instructive purposes. Had the first communication of Captain Baldenstein respecting the Italian bee, not found a place in the Bienenzeitung, that bee would hardly yet have been introdced into Germany, or as extensively diffused as it has been.

But not less great and gratifying is the progress that has been made in the sphere of PRACTICE. *Progress in theory is necessarily followed by improvement in practice*, whatever method be employed. And here again the Bienenzeitung, by innumerable hints, suggestions, explanations, descriptions and elucidations, has contributed essentially to the dissemination and elevation of rational bee-culture, not only in Germany but also far beyond the borders of that country.

In view then of what has been accomplished, shall the Bienenzeitung—in the spirit of him who when asked, a quarter of a century ago, to become a colaborer in the good work, excused himself by pleading indisposition, and saying that it was *not likely that any one could teach him aught new in bee-culture*—exclaim "It is finished," close the volume and repose on the laurels it has gathered. Ah! no! Man's true duty is to strive perpetually for the attainment of greater perfection, and the maxim—"He who does not advance retrogrades"—finds its application in bee culture also. There is many a veil yet to be lifted, even in the THEORY, and many a problem still to be solved in PRACTICE. We are still ignorant, for instance, of the source and cure of foul brood—that dread disease, the greatest calamity that can befall us in bee-culture. Nay, even the problem how the simplest and best hive may be constructed, is not yet satisfactorily solved, and for the purpose and in the hope of advancing *this*—one of the most important in practical operations—somewhat nearer to solution, I will shortly submit some remarks on the construction of a hive embracing the utmost possible simplicity combined with cheapness and adaptation.

DZIERZON.

Carslmarkt, December 18, 1869.

[For the American Bee Journal.]

R. M. Argo's Report, &c.

As April 10th was the day agreed upon between Novice and myself to write our reports of last year's operations, and as that day comes on Sunday, and I, being a Sabbath keeper, never write on that day, will have to write to-day, the 9th, because to defer it until Monday may be too late to reach Washington by the 15th, considering the distance at which I live, and I will not bother you with communications coming too late.

On page 14, July No., vol. 5, it will be seen that I began the spring with thirteen weak stands; and on page 61, September No. of same volume, I had fifty-two stands up to July 7th. The last swarm, put in the old round gum on that day, went up during the first cold snap in November, leaving the hive half full of nice worker comb, uninjured by the moth, but no honey. My impression is that they deserted, as no bees were in it when discovered, which was while fixing up for winter. This, with the exception of a third swarm, late in June, lost in March, is all the loss I have sustained for the past three winters. Presently I shall say more of those I lost.

As to the amount of cap honey, I tried to keep an account, but some was fed to weak swarms in the fall, and some given away, forgetting to weigh, so that the nearest figure I can arrive at is 420 lbs. Some, not included in this weight, was made in full length frames in the top of other hives, and given to late frames. No feeding was required through the winter, neither in the spring, only for stimulating breeding. All the stands, with the exception of perhaps about a dozen, have too much honey. Had I a melextractor I might safely take away from 200 to 400 pounds, with great benefit to the bees, as will be shown presently. I must have a melextractor, I am only waiting to get the best, which is always the cheapest, no matter what it costs. But as everybody thinks he has the best in use, how am I to find out where to get the best? If Gallup knows the truth he will tell it. He keeps nothing back that will advance the good of bee-keepers.

I commenced feeding rye flour February 10th, and fed two bushels to April 2d. No natural pollen was gathered until this week, as nearly all the winter we had was from February 18th to April 5th. All stands worked freely on rye flour, except No. 27. I examined that one on the 12th of March, and found plenty of drone

eggs but no queen. Supposing that they had a fertile worker, I gave them a frame of brood to raise a queen, taking away the drone brood. On the 22d I found no queen cells started, but a fine large queen, a drone-egg layer. I removed her and gave them another frame of brood, from which they raised a fine queen in fifteen days. I had found a drone in this stand on the 12th of March, and found the same drone laying dead at the entrance the day after the queen was hatched. I fear I shall not have drones for two or three weeks yet for this new queen.

March 25th discovered another stand (No. 7) that would not work on rye meal—a third swarm put in June 22d. The hive was a box 10 x 10 x 12 inches, with a flat board in the middle, five inches wide. This stand showed every sign of a prosperous swarm until discovered; on turning it up two large sheets of sealed comb dropped out. The day being warm I gathered them up in haste, to prevent robbing, carried the hive to a room and took out all its contents —29 pounds of honey, a teacupful of bees, and no queen. There was not more than a foot square of empty cells altogether; sealed honey down to within five inches of the bottom board, and most of the lower part filled with bee-bread. Had they been in a frame hive I could have known their condition and might have saved them; but in the condition they were in, with so much honey in the way, even Gallup or Grimm would have fared no better. I put them in that for want of a better, that is a frame hive.

I have now forty-two stands to begin with. I gave away three last summer and sold five, which makes the number fifty. I had almost forgot to say that I have wintered successfully a small nucleus in a nucleus box, five inches square, as follows: One of the boxes was twelve inches long—I united the bees of two others, and set the two boxes directly on the frames of the long one, and enclosed the whole in a large box with a five-eighth inch augur hole for entrance, stuffing dry straw around between. In this way they have wintered first-rate, and are breeding fast now.

We have no bloom as yet, except the elm trees, and a new sort of plant that has come up very thick in a vineyard not over 200 yards from my bees. They are at work on it very thick, especially in the early part of the day, when warm enough. As no one here knows anything about the plant, I will enclose you a specimen. It grows about six inches high and very much resembles catnip. The red bloom is very thick. I do not know how long it has been in bloom, as my attention was only called to it yesterday by the bees being so thick over the vineyard.

I suppose my report is full enough for the columns of the JOURNAL. Now, while I am writing, Novice may be looking at his bees, thinking which stand to put his new queen from Argo into. I wish him great success, but especially to AMERICAN BEE JOURNAL, which makes no promises that it does not fulfil.

Lowell, Ky., April 9, 1870. R. M. ARGO.

In 1866, England imported 13,521 cwts. of honey, and exported 1,920 cwts.

[For the American Bee Journal.]

Novice's Report, &c.

DEAR BEE JOURNAL:—In accordance with Mr. Argo, we proceed to report the state of our apiary, compared with what it was last year at this time.

As we have before stated, we were reduced to only eleven stocks by that "bee disease," before we could get them at work and healthy again; and of the eleven, not one was a full colony. In fact all of them would not have made four *good* colonies, and one of the eleven queens was killed by an experiment in introducing about the forepart of May; but as that was clearly bad management, we suppose our starting point will be called eleven stocks.

We have now forty-six, all with fertile queens and brood, in a prosperous condition, (as we overhauled them in order to be certain,) with the exception of one queen, which we found had produced nothing but drone brood in worker cells with raised caps. We removed her about March 20th, and gave the colony worker brood. They immediately started queen cells, and now have a young queen, which was out to-day, (April 10th,) with the small drones, but we think was not fertilized, as it was her first flight. As the colony is quite populous, we think we shall have no trouble in keeping them up to the standard.

We will confess to you, Mr. Editor, how very near we came to having only forty-five stocks. After removing our bees from the house, March 10th, we had some of the coldest weather of the whole winter, viz., two degrees below zero. We confess it was with a little feeling of nervousness that we went round and gently tapped on each hive. Those that we feared most were tried first, of course; but when *they* all answered promptly "*all right*," we began to breathe freely, and only thought we would go to the whole, to be positive and no mistake. But we went down to zero ourselves, and no mistake, on finding that one of our heavy hives, when rapped repeatedly, gave "nary" response. "'Twas indeed too true."

With a nerve of iron and a face pale as ashes, we boldly grasped the hive in our arms, and rushed madly for the kitchen stove. (Copyright secured for above.)

With breathless sorrow we hung over that little domicile, where only the night before was the happy hum of peace and plenty. All now was still. No little yellow bodies moved so softly and quietly about, (they were full blood Italians;) but all was cold and frosty in death.

One side of the hive had plenty of sealed honey; but they had eaten along to the other side, and relentless zero found them consuming the last on that side. We warmed them and *re-warmed* them, but not a movement, until after an hour or two, a very few stirred a little, but that was all. We began to think we must give up as we had tried the same thing last year, when they all soon played out again. Our presence, too, was beginning to interfere with the preparations for the noontide meal; but we could hardly give up yet. We lifted our hive again, but this time with less determination than before, and slowly wended beehouseward. We built a fire in our

little stove, got two chairs, hung our coat on a peg after we got up a summery temperature, and forbade interruption.

We opened the hive, brushed the bees into a large pan—all we could get out of the cells, and warmed and warmed them. No use, only a feeble movement occasionally. At length the sun came out, and full and warm his rays came through the frozen air into the single beehouse window. We put the pan on the window sill, to aid us in looking for the queen we had not yet found. Was it our imagination, or was the sun *really* reviving them? They were certainly now coming to, and we certainly were smiling. After sprinkling them with honey and water, they got brisk apace, and on standing a comb up in the pan, they crawled on it as fast as they revived; and those in the cells towards the sun began to "wriggle" out. Before night we had the whole colony back *in statu quo* in their hive; and their pretty little yellow queen is now enlarging the circle of worker brood with all the matronly pride imaginable. So you see we "licked" in the race of life and death, and have our whole forty-six all right!

Mr. Editor, we have almost a mind to feel saucy on the subject of wintering bees; but we don't think we should again remove them so early as on the 10th of March.

The "Apiculturi t" (the new Journal on Bees we mentioned) has made its appearance. We have no time to notice it now, more than to mention that in one of its leading articles, we find the strange assertion that the Baron of Berlepsch proved by *direct experiment that drones raised from fertile workers and unfertilized queens were incapable of fertilizing queens.*

Would it not be better for them to wait a few years and get "somewhat better posted," before starting an "Apiculturist," and having such a blunder as the above in their first number? Many of our own correspondents would write quite differently, if they would carefully read the Baron's experiments in the *first volume* of the AMERICAN BEE JOURNAL. Let those who run their heads so strongly in the dark against Dzierzon's theory, inform themselves a little more, or give us the result of some direct experiments.

Our experience has satisfied us many times over that fertilization of the queen *does not* affect her drone progeny, as wiser heads than ours had told us before; yet every little while some one (dare we say new beginner) starts a long-winded theory, to show that it can't be so. Make some direct experiments of your own, and it may save exposing your ignorance to the rest of the world.

Adam Grimm mentions one experiment that seemed to throw doubt on a drone-laying queen's progeny being capable of fertilizing queens. Yet we have so many experiments that have seemingly proved the contrary, that we must think his, in some way, an exception. The case of our own just mentioned, we think, will be a pretty fair test, as there are no other drones nor drone brood in any of our hives, and certainly nowhere else at this time of the year.

One correspondent reasons from analogy, and cites common fowls. Does he forget there can be no comparison, as bees are entirely different in their mode of reproduction, and we might add different from all the rest of animated nature. Poultry was once our hobby, and we think a careful perusal of that part of our poultry books that treats of keeping the several breeds pure, will make clear to him a point that he does not seem to understand exactly.

The first and second volumes of the AMERICAN BEE JOURNAL, we think, will satisfy any one, or at least show them how they may satisfy themselves by experiment, that fertilization does not affect drone progeny.

We have seen part of an article on wintering bees, taken from the AMERICAN BEE JOURNAL, and copied in *two* bee publications and *three* agricultural papers, none of them acknowledging where they got it, nor seemingly having sense enough to know or mention that the article was written for the climate of Germany, and that taking a *part* of the piece only might grossly mislead the uninformed. It is to the effect that wintering in special repositories is superfluous and an injury, and that *seven pounds of granulated sugar are amply sufficient, with no stores, for out-door wintering.* Could they have copied anything of less importance or calculated to make more mischief if they had tried?

Our bees are now carrying in flour gloriously, they have used up all our rye and oat meal.

And what do you think? We have just had a new circular saw mill started here, and the Italians seem to take full as deep an interest in it as anyone else. As soon as a pile of sawdust was made they evidently seemed to think it a huge pile of meal gotten up expressly for them; and the little fools have not yet (after four days) discovered the difference, but are as busy as possible, bringing home huge pellets by thousands. Is it possible that they can really make any use of it, as they do of meal? We are going to try and find out ourselves, as it is a "heap" cheaper (or a *heap* would be cheaper) than wheat flour, or even rye or oat meal; and they seem to work on it almost as well.

Oh, Mr. Editor, you was to decide who merited that queen, for greatest proficiency in "bee husbandry." Supposing we have both merited one, it don't seem hardly right to take one away from the party that has made the least progress. However, we are content to abide your decision; should you even think proper to give us one each from your own apiary, *we* would not complain. Certainly not. NOVICE.

P. S.—Perhaps it might be well to state just how we came by that drone-laying queen. In August last, to give our Italians room, we put six frames of brood and honey in an empty hive; intending to have them raise a queen. But just then a small afterswarm of black bees, probably starved out, came along, trying to get in some hive in our apiary, as they often do (and this at times when Italians are building combs and storing honey): and we caught their queen, and put her bees and all into an artificial stock, which soon made a fine colony. In September, as drones were still flying and Italians at work, we raised three fine queens, or rather two fine queens and one cell that had not hatched. As it was Saturday night and we were in a hurry, we hastily re-

moved our black queen, put her in a cage over another hive, to save her in case we needed to return her, and simply laid the queen cell on top of the frames (the bees soon cover it, and it is just as well in warm weather, and can be examined at any time without opening the hive). The next day we were on the watch, and saw a fine queen hatch out and go down into the hive well received.

Of course we should have looked after this hive further; but as the two other queens of same age became fertile, we neglected to examine the hive again until the spring, when we found a black queen and drones in worker cells. Of course our Italian queen was lost or killed, and they raised one of their own too late to be fertilized. The drones are quite small, scarcely larger than a worker. Another fact for the bee-house—the colony is now quite populous, although it has had no fertile queen since last September. Had it been left out of doors, how would its condition have been?

[For the American Bee Journal.]

True Theory of Bee-Culture.

MR. EDITOR:—The published report of the profits of N. C. Mitchell's apiary, in dollars and cents, for the year 1869, which appeared in the first number of the Illustrated Bee Journal, has created quite a sensation in *Beedom* in these parts. The illiterate generally discredit it; the mediocre is taken aghast; while the would-be knowing ones are completely knocked off their pins. But, Mr. Editor, I believe every word of it, although at first, I must confess, I was considerably exercised, as it was such a *big* step in advance of anything of the kind ever before given to the public, and so completely upset and cast into the shade the most extravagant reports of even those whom, from their long experience in the business, and their oft repeated practice of coming before the public as models and instructors in the art, one would have supposed had reached the acme of perfection. But this is an age of progress and reason, or, as a quaint writer pertinently observes, "an age of steam-cars and telegraphs." Rapid strides are being made towards the perfection of science and diffusion of knowledge. The importance of practical light in the great work of ameliorating and improving the condition of man, is beginning to be seen and appreciated. The cause of truth has suffered much, in many departments of science, from a system of practice, the principles of which, depend more for their validity on the fruitful imagination of an infatuated brain, than upon that order and relation established by the Creator himself.

In no department of rural economy has this fact been better exemplified than in the science of bee-culture. While scientific men in all ages and countries have puzzled their brains to discover the modes of action that govern the growth and economy of vegetation, in order to improve the art and science of husbandry, apiarian science, the most interesting and profitable of all rural pursuits, has been involved in comparative obscurity. Though a few important advantages have been secured, by a better adaptation and arrangement of the domicile or habitation of the bee, to the natural habits, wants, and instincts of that insect, the true theory of bee-culture, in accord with the natural system presented to our view in the order and relation of principles established by God himself, and producing their results according to that order, has never before been correctly understood. The term science, technically considered, means a system of first principles or elements which, as a whole, compose the foundation of that system, whether in the animal, vegetable, mineral, intellectual, or moral kingdom. But science, taken in the true signification and meaning of the term, denotes a knowledge of these principles with regard to their active and operative powers, and their relations to each other, in maintaining the economy and harmony of that system, together with a knowledge of the effects which would result from their regular and uniform operation.

He who would succeed in directing and shaping the action of a colony of bees so as to secure the greatest amount of profit, and proceed with a certainty of success, must study and apply that system of principles which constitutes the foundation on which bee-culture rests. In the application of these principles he should possess sufficient tact and judgment to enable him to vary their application so as to reach the exigencies of each particular case. Has this degree of proficiency been attained by any of our fellow bee-keepers, at this stage of progress in our onward march towards perfection? We believe it has, and with it the dawning of a day rendered bright with the light of shining countenances, and full of promise and comfort to millions of toiling men who will teach their children to bless and honor the names of those instrumental in hastening the good time coming. We believe that, by the unremitting toil and study of years, a theory has at last been discovered and applied, that will satisfactorily account for the large returns claimed. The practice of bee culture, in accordance with the principles involved in this theory, if persevered in, cannot but be productive of results in the highest degree satisfactory. It is a fact well known to bee-keepers, that at times, and under certain conditions, colonies of bees, in the accumulation of stores and the general economy of the hive, will so far exceed the general average of colonies equally strong, as to fill the apiarian with astonishment, and almost persuade him that they are a superior kind of bee. In my own practice I have oftentimes had colonies to work, with untiring diligence, weeks after the labors of others had ceased. So, too, every bee-keeper is cognizant of the superior thrift and industry in which a newly made swarm, whether natural or artificial will excel others by its side, having perhaps twice its amount of bees. I once had a swarm to issue on the last day of June, from a common box hive, after having doggedly refused to do so for nearly a month, the bees all this time lounging inside and out on the sides of the "gum," without any apparent increase in the contents of the hive, except in brood and bees. This swarm, with above the average in number of bees, was

put into a hive of the capacity of about 2200 cubic inches, inside measure, having glass in the rear, its full length, with a blind to intercept the light and darken the chamber. In two weeks from the time this swarm was hived, such was the extraordinary rapidity with which it worked, its hive was filled to overflowing with combs and honey, and two boxes, of the capacity of about thirty pounds, placed on the top, were filled likewise. The boxes when filled were taken off, and an estimate of the honey stored in both hive and boxes, which could be done with some degree of certainty as their weight when empty had been ascertained and marked on their sides. After making the necessary deductions for bees, brood, &c., I estimated the amount of honey gathered at eighty (80) pounds; apportioning fifty pounds to the brood chamber, which I deemed moderate, as the honey was capped in the combs within two inches of their lower edge. Here is the clever amount of eighty pounds of honey secured by a colony of bees in two weeks, while under the honey gathering impulse excited by swarming,—which impulse, or propensity for gathering honey can be generated in a colony of bees at any time that there is bloom, and maintained throughout the season.

This extraordinary industry in newly made swarms (but by no means peculiar to them) has often been remarked by bee-keepers, and given rise to much speculation as to the true cause of its development. Among many causes assigned in explanation of this seeming mystery, perhaps the most plausible is the theory which supposes the queen's age and fertility to govern the industry of the hive. But, admitting the full force of this assumption, with full conviction of the advantages secured to the apiarian by the continued presence of a young and prolific queen in each and every colony, there are times and instances, in which even this fails to furnish the explanation required; as, for instance, the case already cited, in which prior to the issuing of the swarm, a few bees only left for forage, while the much larger portion lounged on the sides of the hive for days, feeding on the stores already garnered. If the queen's extra fertility be urged as a proper solution of the extraordinary rapidity with which this swarm filled all its tenements to overflowing, we must imagine her to have suddenly acquired some new capacity for laying, else the difference in the bees, in point of industry, before and after the swarming, cannot be satisfactorily accounted for.

The point to be gained by the bee-keeper of the present time is to ascertain, if possible, the true cause of the honey gathering impulse in bees; the conditions necessary to its continuance throughout the season; and the most efficient means of generating and stimulating it to its fullest capacity, in order to secure the largest returns. If the product of a swarm of bees incited to labor by causes in accord with their natural habits and instincts, will reach the attractive exhibit of eighty pounds in two weeks, to what amount will this increase if the honey gathering propensity is, by judicious treatment, fostered to its fullest capacity, and retained in this condition throughout a long and inviting honey yield? If, through the inventive genius of man, we are enabled by means successfully introduced, to rouse the slumbering activity of our bees, and thereby secure a continuous product of eighty pounds, or more, every two weeks, it will not require a very great amount of figuring to show how he can increase the average yield of every good colony to 500 pounds of honey.

In conclusion, I would suggest for the benefit of those bee-keepers who have hitherto fancied themselves the big lights in the business, and those whom Mr. Quinby refers to in one of his communications to the BEE JOURNAL, "as quite likely to imagine they had reached perfection, and with them would be the end of all progress," to withdraw from the field as instructors for a while, and quietly consent to be beat; for gentlemen, you are beat—myself included—and badly beaten too! Even the far-famed Mr. Gallup, who, in my opinion, has reached a point in successful bee culture far in advance of many of his contemporaries, is also beaten; for all who had the good fortune to read Mr. Gallup's articles in the Bee Journal, will recollect that he never claimed the ability to increase a good colony to over twelve or thirteen in one season! Therefore, gentlemen, let us quietly submit to be beaten, and not like some others get mad about it, and make ourselves extremely ridiculous by recording ourselves as antagonistic to "the progressive spirit of the age!"

JOHN L. MCLEAN.

Richmond, Jeff. Co., Ohio.

[For the American Bee Journal.]

Bee-cellars should be Ventilated.

I see, on looking over the Journal, that a large proportion of bee-keepers are undecided about the cellar as a repository for wintering bees. One has tried the cellar, and found it a good place; another has tried it, and found it a bad place, etc.

In the first place, a cellar, if slightly damp, should have abundant ventilation; for I take it for granted that bees must have fresh air in order to be healthy, as well as human beings or every animal that breathes. In fact, every repository where a number of stocks are to be kept, whether under ground or above, should have ample provision for ventilation. And, in cold weather, fresh air should be rarified or warmed somewhat, by passing through an outer chamber; or, where nothing better is practicable, by having it pass in through a trench or pipe under ground. In warm or mild weather, doors or windows can be opened at night and closed in the morning. Also, ventilate each swarm according to the number of bees it contains, and give upward ventilation. Different forms of hives require or will admit of different modes of ventilation. Do not be alarmed about the water-dearth, for if your room or cellar is ventilated right, they ought not to commence breeding until about the time to set them out in the spring. If the cellar or repository is too warm, they will commence breeding earlier, and will then want water; but I consider it poor policy to start them to breed-

ing until just before setting them out. I know by actual experience that a pint of bees can be wintered in my hive, in my cellar; and an extra large swarm can be wintered in the same kind of hive, in the same cellar; and both winter equally well. Now, if a pint of bees can be wintered in my hive, with the proper ventilation, the reader will readily see that any number of reserve queens can also be wintered with safety. I have wintered reserve queens, and then, if I did not want them in the spring for queenless colonies, built them up into full and profitable stocks the ensuing summer.

NOVICE'S plan of ventilating his new bee-house is a good one; that is, having the air come into the vacant space under the floor, before admitting it into the room where the bees are. He may not have provided sufficient ventilation in a mild winter, but that he can remedy by opening doors at night. He will be apt to find that a large number of swarms stored in it will require abundance of ventilation, especially in mild weather. With thirty-eight swarms in my cellar, I only closed the ventilator two nights, up to January 18th. In one of those nights the thermometer was down to 15°, and in the other to 10°, below zero; and by twelve o'clock the following day the cellar would get quite warm, so that some of the swarms would manifest uneasiness; but on opening the ventilator, they would soon be all right, though the thermometer was still at zero. Potatoes are keeping well in a bin under the bees, but turnips and onions in the centre of the cellar are sprouting considerably.

My first attempts at wintering bees in a cellar were entire failures. I lost ten good swarms, all for the want of requisite knowledge.

E. GALLUP.

Osage, Iowa.

[For the American Bee Journal.]

Can we Compel or Persuade Bees to build Straight Worker Comb throughout the Hive?

MR. EDITOR:—When Mr. Langstroth invented the movable comb frames, he laid the foundation for improved bee-keeping. But the frames, of course, were useless unless straight combs could be secured in them. I believe he first used the flat bar, but soon invented the triangular guide which has caused so much contention.

This guide is not reliable. Still, the tendency is to secure a straight beginning in the top of the frame. But, when started right, they are liable to be warped and twisted, so as to make crooked work as they are carried down. To compel the bees to carry them down straight, and all of the same thickness, the Calvin comb guides were invented.

I used these guides three seasons, and will give my experience with them. The first season I used them in one hive, and had the most perfect work I ever saw. The combs were almost as straight and even as a joiner could plane a board. The second season they were put into three or four hives. The result was a failure. I supposed it to be owing to the season being poor, as the bees were frequently interrupted by bad weather.

The third season I put them into four or five hives, and although the season was a good one, and the hives were filled with comb and honey enough to winter well, the swarms were ruined. Full half the combs were built crosswise, and of course in small pieces; and such as were built lengthwise were so crooked, and attached to the guides to such extent that these could not be taken out without cutting the combs and ruining the swarms. I was busy at the time the guides should have been taken out, or the trouble might have been prevented in part. The guides are now laid away among the things that were.

The next course adopted by me to get straight combs, and the most reliable of anything I have tried as yet, is to use worker-comb fastened to the under side of the flat top bar with beeswax and rosin. If it is the right kind of comb, and properly put in, it is perfectly reliable in starting straight worker-comb. But how long the bees will continue to build it down straight and not change to drone comb, is uncertain. They need some looking after to keep it straight. This we can do, but can we prevent them from building drone comb?

New comb is not as good as old, as it is more brittle, and liable to be injured in putting in. But comb with bee bread in it should be discarded. The bees will gnaw it out, and in doing so will frequently spoil the comb. In using old black comb, I prefer, after it is put in, to shave it down to an angle, commencing at the center and slanting to the edge of the bar. This takes off the old thick end of the cells, and leaves the comb all newly cut. So far as my experience goes, the bees are better satisfied with it, and are less liable to injure it by gnawing it down. Besides, in clustering to commence building, they are not so liable to pull it off, if not well fastened on.

I understand there is a machine invented to stamp guides for worker-comb. Thin strips of wood with one edge dipped in melted beeswax, and the base or bottom of worker-cells stamped on it. It is claimed that this secures worker-comb throughout the hive. I have no doubt the bees may follow the guides awhile, but I think they will change to drone comb whenever they are so inclined.

Mr. Langstroth at first placed his frames one and a half inches apart, from centre to centre; but afterwards put them nearer. I suppose the object in placing them nearer was to induce the bees to build worker-comb. It does not seem to have the desired effect.

CALVIN ROGERS.

Newburyport, Mass., May 9, 1870.

Though naturalists, for convenience of arrangement do not give pre-eminence among insects to the order Hymenoplera, yet are they the most volatile flyers, the most agile runners, the most skilful burrowers, and the most consummate architects.—*Shuckard.*

[For the American Bee Journal.]

Artificial Swarming.

The season of swarming will soon be here, and it is exceedingly important to know how to multiply stocks with the probabilities of the greatest success.

Mr. Wurster, of Kleinsburg, Canada, proposes to multiply colonies by filling an empty hive with combs and setting it on the stand of a strong stock, while the bees are out gathering honey, so that when they return they will be compelled to accept this new hive as their home; after a short time a virgin queen is to be given them, when the process will be complete.

This plan lacks two elements of success.

1. The new swarm would consist of old worker bees, whose instinct for rearing young bees would be mainly at an end.

2. The bees could only be made to adhere to the new hive after a long and exhausting effort to find their home, wherein hundreds would perish; and others would seek to join other colonies; and still others would continue their search till they found their old home. By this time their numbers would be so reduced, that they would be almost worthless.

Our profits come chiefly from early and large swarms. To secure such should be the grand aim. If you have ten populous colonies, crowded with bees, ten new colonies can be best formed, according to my experience, in the manner following:

Eight days before you propose to make swarms, select the very largest colony and purest stock of Italians, and drive out a swarm by drumming, if in a box hive, or shake them from the frames, if in movable combs, being sure to get the queen with them, and let them enter a new hive, placing it where the old stock stood. Give them one frame containing combs with honey, eggs, and young bees, to prevent desertion. This will of course be your first swarm.

Place your colony from which the swarm was driven, a few feet at one side from where it formerly stood, so that it may catch up a few of the returning bees. At the eighth or ninth day examine this colony and count all the finished queen cells; and proceed to form as many swarms as you have queen cells, (except one which is to be left in the first old stock,) driving all the time from your most populous colonies, proceeding just as with the first. The next day give each of the old colonies a mature queen cell, placing it in a cavity cut in the midst of the brood.

If there are not cells enough at the end of eight days, those needed can be taken from the stock which was left without a queen for this purpose. Thus proceeding until all your bees are swarmed, they will do as well as though they had swarmed naturally, with the advantage that your swarms have been made just at the right time.

Now put on your honey boxes, and if your swarms have been made about the time the white clover begins to yield honey plentifully, you will secure the greatest results in the yield of honey. If you have good clean worker comb, use that for your new swarms; it is just so much saved to the bees.

Of course you now use the movable comb hive and the Italian bees, or will soon make provision to do so, if you expect the largest profit. After an experience of eight years, in my Mount Pleasant Apiary, I have found them superior in every respect. Friends are invited to call and look at our stock. Mr. J. L. Strong, my partner, will take delight in showing them our manner of managing the honey bee.

E. L. Briggs.

Mount Pleasant Apiary, Henry Co., Iowa.

[For the American Bee Journal.]

Stopping Fugitive Swarms.

Mr. Editor:—Inasmuch as you are almost daily in receipt of letters from the Northern and the Western States, perhaps you will not object to a line occasionally from the "Old North State," written by one who heretofore unknown in the columns of the Bee Journal, as Langstroth, Gallup, Grimm, Thomas, Green, or Novice, but who will answer through the American Bee Journal whenever called *Ignoramus*.

As this is my first article for a Bee Journal, I shall be brief as possible until I see that Ignoramus has a place in line with your other correspondents. But for a start, I will state that a neighbor of mine was in an open field last spring, when his attention was attracted to a vagrant swarm of honey bees rushing past, on the wing. He followed through field and forest until nearly exhausted, when he found that the bees made no signs of wanting to cluster, and that they were two hundred and more yards from woods, or nearest shrubs. Having gone through many of the Dutch manœuverings in trying to stop them, he was so tired that to follow them further was out of the question. So he drew from his pocket a small "looking glass" with which he thought he would "blind the bees" in the sunshine, and make them stop anyhow. Immediately after using his glass, the bees turned, went directly back to the woods, and clustered on the nearest bush.

Will the editor, Mr. Gallup, or some one else, please inform me what the turning of the looking glass had to do in stopping a swarm of bees when running away?

Ignoramus.

Sawyersville, N. C.

☞ We have frequently heard of arresting fugitive swarms by means of the looking-glass, but never saw it done. Mr. Langstroth, on page 114, "Hive and Honey Bee," third edition, says—"The most original of all devices, for stopping them [a decamping swarm] is, to flash the sun's rays among them by a looking-glass. I have never had occasion to try it, but an anonymous writer says he never knew it to fail."

If wet weather occurs to prevent your bees from flying out while blossoms abound, feed them moderately every day, to keep them in heart and stimulate brooding.

[For the American Bee Journal.]

Observations, Statistics, and Queries, relative to wintering bees in cellars and special repositories.

MUCH ESTEEMED EDITOR:—The subscriber has been a beekeeper about fifteen years, during which time he has been constantly experimenting with a great variety of hives, both patented and original, all *home* made and *well* made; and has also been experimenting in every "*modus operandi*" incident to beekeeping, particularly relative to wintering bees in all varieties of ways. In some of these he has *succeeded*, in others *failed;* FAILED and SUCCEEDED in every plan yet tried, and is yet a *novice*, at LEAST No. 2, and would be No. 1, did not another occupy that chair, and rather assumingly, too, we think!!

Well, we are still in doubt relative to the exact best method of preparing the hives containing colonies for wintering in special repositories. We do not keep many bees; never having attempted to winter more than ninety colonies in a single season. We have a very excellent, neat, dry cellar—so dry that apples would shrivel in it. It is about twenty feet long, by twelve feet broad, and nine feet high, with a nice, smooth, flagged bottom of flat stones, two and a half inches thick, laid on dry sand. The walls are massive, say three feet thick, (it being in one corner of a large stone edifice, eighty by fifty feet and four stories high). A brick wall divides the cellar from another in the opposite corner, and a wooden partition from a cross hall, on the opposite side of which is a large dairy, where butter is made, all winter, and which is of course kept at a fit temperature for raising cream, summer and winter.

In this cellar we have wintered, successfully and unsuccessfully, from thirty to sixty-one colonies of bees. These were in movable comb and box hives; some in Langstroth's, some in Kidder's, and some in other styles of movable comb, and yet others in box hives.

The temperature of this cellar is very uniform, ordinarily not varying more than from four to six degrees all winter, even when containing sixty colonies of bees—the variation being 34° to 40°. The cellar is ventilated from the outside, by six pieces of one inch lead pipe thrust through the window frames, of which there are two—one on the east side and one on the south. Through the inner partition there is a round aperture, six inches in diameter, at the bottom, leading into an outer cellar and open hallway connecting with the dairy.

In the winter of 1868-9, we wintered in this place sixty-one stocks. Twenty-four of these were in box hives, set upon shelves, having the holes through the top of the hive, connecting with the honey boxes open, inverted, with a straw mat over the bees. We found some of the strongest became uneasy, and removed the mats to quiet them. But these did not winter well; they crawled out badly, and many bees died and fell down among the combs. We did not like this plan, and would prefer setting them right end up, on a nadir frame four inches high, ventilated through its sides. Yet we have wintered box hives in this same cellar, inverted and fixed as first stated, which wintered well; but there were then only twenty-four colonies in it, set only four inches above the stone bottom.

The remaining thirty-six colonies were in movable frame hives, set on four inch slatwork, placed on the cellar bottom; the passages in hives at bottom open; honey boards removed; wire sieve preserver on top, with a straw mat one inch thick over this. These wintered well.

The past winter, 1869-70, we put into this cellar thirty-six stocks in movable comb hives. Many of them were weak in numbers and scant in honey, though we fed two barrels of white coffee A sugar to about fifty colonies, between the 7th and the 20th of September last. It was mostly sealed over. This sugar was simply melted with about twenty pounds of water to twenty-five pounds of sugar, and one teaspoonful of cream of tartar to twenty pounds of sugar. The result is that we lost thirteen of these thirty-six colonies, *seven* for want of food and *six* from some other cause—perhaps because there were no young bees bred late in the fall. Or, was it because of their feed? All the bees, both those that were fed and those not fed, were affected with a kind of dysentery, though they did not soil the combs at all, but only the tops of the frames. Three-fourths of the bees in each colony died, however, from some cause—apparently dysentery.

Query. What produced this dysentery? The mercury did not vary over four degrees, in this cellar, all last winter. Was it the cream of tartar put into the sugar? If so, why did those colonies which were not fed at all become in like manner affected, as was the case?

We had fifty-four colonies in a new bee-house, built expressly last summer, for wintering bees. It had double sills on all sides, and four sets of studding. It has three walls on each side; two of straw, eight inches thick, and *one* of eight inches of sawdust between them, two floors, and one foot of straw and eight inches of sawdust between them; a floor overhead, and on this it is designed to place one foot of sawdust and one foot of straw. This was not finished last fall. The room is twelve by twenty-six feet inside, and nine feet high. It is divided through the middle, lengthwise, to a hall five feet wide, which is partitioned off of the south end by a stud and board partition, with one inch matched boards, and the space between the studs is filled with sawdust. Thus we have two bee-rooms for storage, each six feet wide by twenty-one feet long and nine feet high. From each of these rooms we have a ventilating chimney, four by six inches, reaching from one foot below the floor overhead two and a half feet above the roof for egress of foul or heated air; and one ingress ventilating chimney, four inches by twelve, reaching from the lower floor of beeroom out above the roof. This is so constructed as to supply each of the beerooms, as one-half of it opens into each. In warmest weather these ventilators were left open; in the coldest they were nearly shut; but owing to so thin a covering on the floor over the rooms, the mercury varied too much—about eighteen degrees; that is, it fell to 22°, and rose to 40°,

though it would require several days to make the change.

Well, into this house, as we have stated, we put fifty-four colonies of bees. Only *very, very* few of them were strong in numbers when put in, owing in part to so bad a honey season that they did not breed in the fall; and also to a heavy flood, which drowned out my apiary. The hives having to be hastily carried out (I being absent some three hundred miles from home at the time), they were so mixed up that, on my return, I could not replace them all in their proper positions, and many bees were lost when the weather was such that they could fly again.

We removed the honey boards, put over them wire-cloth preservers, and a straw mat on some; on others a rag carpet, one thickness, covering the tops of the frames entirely. The entrances at bottom of hives were closed.

Well, all of these bees, like those in the cellar, had the dysentery. Not a particle of mould appeared on the combs. Nearly all the colonies were fed in the fall; but all were alike as to dysentery. None of them soiled the combs, but the tops of the frames were stained. Question—What gave these bees the disease? Was it bad honey? Well, some of the honey is bitter; but this is principally the box honey. Was it too much ventilation? Well, the strongest stocks were most diseased. Again—about the first of February, a neighbor put into this house some fifteen very strong stocks, leaving the honey boxes on. Of course these had not near as much ventilation as ours had; but they were much more diseased. Was it too little ventilation? Who will tell us through the BEE JOURNAL?

A neighbor once had a large apiary in a yard surrounded by buildings and a fence twelve feet high. The hives were setting on their summer stands when a whirling wind swooped into this yard as if on fantastic toe, and upset a large number of them. There they lay, on their sides, in the snow, with the bottoms open to the cold and storms for many days, as their owner did not discover it for some time. Yet no harm came of it, they all wintered finely.

Was that dysentery caused by the food given to the bees early in September? which consisted of good coffee A white sugar, as before mentioned? If so, why were those colonies that were not fed as badly affected as the others—the heaviest even being the worst?

Will some of your numerous correspondents, dear Editor, give us the philosophy of this condition of the bees? That of those in the bee-house, where the mercury varied 18°, being precisely the same as that of those in the dry cellar, where it varied only 6°. No moisture appeared to have accumulated in any of the ninety colonies, except one, and that was a very strong one, and immensely heavy in honey. The amount of bees that perished in each colony would perhaps average two quarts—some more, some less. There was very little bad smell about the hives, and the combs were clean.

It would bring instruction to the numerous readers of the JOURNAL, at least to such of us as are novices, to have more definite statements of the manner the hives are prepared when stowed away in special repositories. We lack sufficient statistics. Will our successful friends, who are successful every time, tell us the *size* and *condition* of their cellars or depositories, and the *variations of temperature* therein? Will they tell us whether the outside walls are laid in mortar, or without? Have the cellars flagged or cement bottoms, or earth? How much, that is how many square inches of ventilation, and how *direct* to the repository? What number of colonies deposited? &c., &c.

Our bees have no foulbrood. We hope to retrieve our losses; and as we intend to finish our beehouse with upper floor coverings, and bank it in so that the air cannot pass under it another winter; shut up the ventilators of the house somewhat more (unless some one tells us a better way); and try again. And we intend to try on, until we can succeed every time.

Will not our friends and instructors, Quinby, Cary, Grimm, Gallup, Novice No. 1, and others, give us their advice, through the columns of the BEE JOURNAL, and post us up in these statistics.

In all our enterprizes, agricultural, horticultural, apicultural, &c., &c., we need more definite statistical information, to enable us to come out right in the Spring.

Yours, *Hopefully*,
NOVICE No. 2.

Mount Lebanon, N. Y., April 18, 1870.

[For the American Bee Journal.]

Bees in the Southern States.

I would answer query No. 2, in the AMERICAN BEE JOURNAL for February, that from all the facts which I have gathered concerning bees in the South, this climate is eminently adapted to their nature; and that their instinct here, to store honey, is as great as at the North. During the latter part of the summer, in this locality, they generally cannot procure more supplies than suffice to satisfy their immediate wants; but when an abundant harvest does present itself, they avail themselves of it with preserving assiduity. I have seen hives where the bees had built comb on the outside, under the projection of the top, not having further room within. And instances are numerous of bees inhabiting hollow trees, building combs several feet in length, below branches in front of their entrance—thus indicating that they do not slack their industry so long as they can obtain honey.

A large apiary, properly conducted, in this portion of the country, could not fail to be profitable. I only regret that I am not so situated as to be able to devote myself to it more fully than I can do at present.

J. R. B.

Natchez, Miss., Feb., 1870.

Nearly all the bees which return from the fields while a swarm is being forced out from the parent hive, will enter the hive if it is put upon its old stand, and adhere to it afterwards wherever it may be placed.—*Langstroth.*

[For the American Bee Journal.]

Replies to Inquiries, Notices, &c.

In answer to a few inquiries by Joel Dayton, I will say—keep the top of the hive as tight as it can be made, as soon as the hive is set out. A strong swarm will wax up every little crevice themselves, but a weak one must be assisted. Contract the size of the hive by the use of the division board, to assist all weak swarms in keeping up internal heat. Also, stimulate regularly with diluted sweet; and as soon as the weather becomes steady warm, strengthen weak stocks by giving them sealed brood from strong ones. The extra combs should be taken from the hives and kept in a cool place, and returned one at a time, as the bees require them. If the swarm is weak in consequence of the queen being unprolific, it should be supplied with a prolific queen, as it is useless to keep strengthening up a swarm that has a worthless queen.

I move the hive forward on the bottom board sufficient to have it project over the front edge the whole width, or raise the front of the hive on small blocks, which answers the same purpose. A strong swarm, when storing honey rapidly in boxes, will want an inch of space the whole width of the front, in warm weather, especially in your locality. On high, airy prairie they will require less. I will here state that Decorah is in a small valley, almost completely surrounded by high ground.

And now, Mr. Editor, allow me to say that the Michigan Beekeeper's Convention has rather misrepresented Gallup's paper on bee maladies. Wonder if they had been spilling bad whiskey until they could not read straight. There, gentlemen, I am perhaps harder on you, than you are on me; but remember that you are the first aggressors.

Mr. Quinby thinks there must be a mistake about queens hatching in less than ten days. As he does not believe me I will refer him to Mr. D. W. Fletcher, of Langsingville, N. Y., Mr. G. A. Wright, postmaster, Orchard, Iowa; and last but not least the editor of the AMERICAN BEE JOURNAL.* Either of those gentlemen can and probably will give information on this subject. The cases where queens have hatched on the morning of the ninth day with me, are so numerous that the tenth day cannot be accepted as the rule; and from one case I am perfectly satisfied that they may, and sometimes do, come out on the *seventh* day. E. GALLUP.

Orchard, Iowa.

* If the weather permit, we now always transfer queen cells on the *eighth* day; having so very frequently found them destroyed, if we deferred securing them till the ninth, that we do not trust waiting even till the morning of that day. Much depends doubtless on the strength of the colony, and the temperature maintained in the hives.

ED.

Keep the moths from your empty combs by exposing them occasionally, in a close box, to the fumes of burning brimstone.

[For the American Bee Journal.]

Two Yellow Bands, or Three?

On page 200 of the April BEE JOURNAL, Mr. Quinby, speaking of the yellow bands or purity of Italian bees, conveys the idea that the light-colored bees bred by Dzierzon and some careful breeders in this country, are not as pure as the two-striped darker colored ones, such as he procures from Mr. Gravenhorst. Mr. Quinby admits that it may be possible that the very light ones are pure, but thinks we should not claim that they are purer than the two-striped ones.

Now my experience is that to breed queens from one that produces two-striped workers, they will almost invariably produce some black bees. I have always bred with the understanding that queens producing workers with less than three stripes, are not pure. Now, who knows whether I am right, or friend Quinby? Let us settle this point, for if friend Quinby can sell queens that produce workers with only two stripes, let us all do the same, and call them pure. I will admit that it is easier to rear two-striped queens, than those having three or four stripes. But, I am not willing to admit that they are as pure; and I do not like the idea, after some of us have, by careful breeding, succeeded in producing beautiful little colored bees, to have others claim that these are not any purer than those having only two stripes—which, till a recent date, we have been taught were not pure.

AARON BENEDICT.

Bennington, Ohio.

Double Flowers.

It would be a sad business for the busy bee, if the florist's skill could so improve the asters and golden rods of our fields, as to transmute *all* of them to *double flowers*. Even could they thereby render them as delightfully fragrant as they would be splendid in appearance, the show and fragrance, though gratifying to the eyes and olfactories of amateurs, would by no means make amends to the bee for the loss of honey-secreting power which the metamorphosis of petals would involve. Luckily for the lovers of honey, however, science and skill combined, though able to improve a few varieties to such extent, can never reach and change the whole floral kingdom.

The Bee-hunter's Secret.

"Sometimes he took up bee hunting for a spell, and made money by collecting wild honey. He described his manner of finding the hive or nest and securing the honey; and, with a hushed voice, he told me a secret, which was—that, if you took three leaves, each of a *different* tree, in your hand, there was never a bee would dare to sting you!"—THE SOUTHERNER AT HOME, No. IX.

Among the ancients honey from Sicily was held in highest estimation, so that Hyblean honey was proverbially famous, though by some the Attic honey was preferred to all other.

[For the American Bee Journal.]

The Queen Nursery.

I recently received from Dr. Jewel Davis, of Charleston, Illinois, a circular respecting his patented Queen Nursery. In theory the matter seems very plausible, but how about its practical applicability? Two years ago, as I remember, Mr. Adam Grimm, of this place, used an arrangement substantially similar, and in so far anticipated the Doctor. But he soon discontinued the use of it, as not fully answering the purpose; and as I know Mr. Grimm to be a thorough apiarian, I can scarcely think that others will be more successful with the new device. Moreover, according to the description given, though we may secure an increased number of colonies, we shall not obtain supernumerary queens for market, unless we rear them specially, and this with more or less damage to the colony, by depriving it of its fertile queen.

I found that Mr. Grimm subsequently employed a process practically much more serviceable—permitting the young queens to mature and leave their cells in the parent hive, and removing them only when fertilized. I have known as many as from ten to twenty queens to be taken from a colony by this process, and used satisfactorily in forming nuclei.

Instead of the plan employed by Dr. Davis, I should prefer to insert in the deprived colony, or artificial swarm, a nearly mature queen cell, which will readily be accepted; and let the bees themselves "nurse" their queen.

The passion for patenting appears to be becoming epidemic among bee-keepers, so that one can scarcely venture to make and use an alteration or improvement in anything relating to hives or bee-culture, without previous careful inquiry whether somebody has not already covered it with a patent, subjecting the user to the risks or costs of litigation. Besides, the numerous patented hives now claiming notice serve rather as a discouragement to bee-culture, perplexing new beginners, leading them into useless expenditures, not unfrequently ending in disappointment, if not loss. I have myself seen not a few of such patented novelties into which I would not put a swarm of bees, if given to me gratis. It is sad to see such a waste of good lumber, fit now only for kindling wood.

W. WOLFF.

Jefferson, Wis.

[For the American Bee Journal.]

From the Cumberland Plateau, Tenn.

MR. EDITOR:—I thank Mr. J. M. Worden for his description, in the March number, of the hive he uses. I have for many months desired to see or obtain a description of a hive in which the frames stand on the bottom board and the honey boxes are placed on the sides of the frames, in contact therewith. I do not wish any boxes on top of frames, for my own use. Mr. Quinby was requested to describe his hive in the JOURNAL, and thereupon Mr. Worden responded.

I came here from Ohio last fall, having sold all my bees, and am now commencing anew. On my way hither, I called on Dr. T. B. Hamlin, of Edgefield Junction, near Nashville, and purchased two queens to commence with on this mountain; and I suppose I am the only breeder of Italian bees on the Cumberland Plateau. I found Dr. Hamlin's apiary well cared for—his bees and queens handsome. He controls fertilization by the newly invented methods, and I consider him a very careful and reliable breeder.

I purchased a good many queens of different breeders last summer, and, so far as I know, did not get humbugged by any. I sold the queens I bought to others, and did not see the progeny of all of them. I found A. Grimm, W. W. Cary, and A. Gray, reliable. I intended to buy of Mr. Alley, but my order was sent so late that he could not fill it last fall.

The alders were in bloom here on the 15th of February, and the bees carrying in pollen. But cold weather soon followed, and I saw no more blossoms till March 18th, since which time vegetation has advanced rapidly. Apple blossoms are now about gone, (May 5th,) and crab apple and other wild flowers in abundance. I saw my young Italians flying on the second of February.

W. C. CONDIT.

Howard Springs, Cumberland Co., Tenn.

[For the American Bee Journal.]

Introducing Queens.

If friend Wilken will try fumigating with tobacco smoke, I am inclined to think he will lessen his losses very materially. The process is as follows: Open the hive; remove the old queen; place the new one in her cage on top of the frames; throw an old carpet over the frames, covering up the caged queen and the bees; put on the cap of the hive; blow tobacco smoke into the entrance for three or four minutes. Now stop a little while, and then resume blowing in smoke, continuing it for five or ten minutes, or until the bees commence to fall down and crawl out of the hive; now give them air, raise the cap and carpet, liberate the queen and let her run or drop down among the bees, and in twelve hours she will be depositing eggs.

It does no harm if the bees get so much smoke that they all tumble down to the bottom of the hive, and the queen too. The bees seem so glad to think they are alive that they will readily accept of any queen, when thus treated, even a young unfertile one. I have seen them fondling over the newly introduced queen, when they were still so drunk that they could not crawl. I think it a sure plan, and then it is all done in twenty minutes. I have exchanged queens quite late in the fall, in this way. The bees do not seem to know that the queen is a stranger.

This is friend Alley's plan. Speaking of Mr. Alley reminds me that I received two queens from him last fall, the worker progeny of which are the most beautiful of any I ever saw. I have bought queens of different persons, at from $20 down to $2.50, and would not exchange those two for any I ever had.

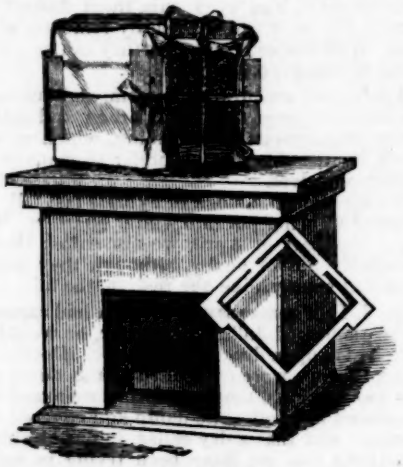
A friend, who is a *bee*-ist, called and pronounced them the handsomest he ever saw. He says he saw none at the State Fairs, last fall, that were as well marked; and then they are as gentle as flies, and almost as harmless. I never had bees that were so quiet on the combs while being handled, as they are. The queens are large and handsome, and so far very prolific.

H. C. BARNARD.

Charleston, Ill.

[For the American Bee Journal.]

Price's Revolvable, Reversible, Movable-comb, Double-cased, Sectional Bee-Hive.



THE CASKET.

This invention is destined to mark a *new era* for successful wintering and profitable bee-keeping.

1. It is the best hive for wintering and stimulating bees, and for early breeding. It has the best sectional surplus honey boxes and the best storage facilities.

2. It can be used either in horizontal or angling position, and is the best hive for wintering either on the summer stand or in bee-house, cellar or other repository.

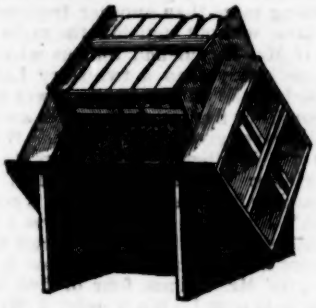
3. It is the best and safest ventilated hive ever made. A swarm cannot be suffocated in it under any circumstances.

4. It has all the advantages of frame hives without their disadvantages. The size of the brood-chamber can be made small or large at will, to suit the requirements of the colony.

5. It is on an entirely new principle, and is warmer in winter and cooler in summer, and of a more equable temperature night and day than any other hive. The bees cannot gum or propolis them so that the sections and comb cannot be handled separately.

6. The surplus honey sections are in close connection with the brood-chamber, and with one another, and the bees are certain to work in them when there is honey to store. The sections can be used to the full capacity of the hive, or of the bees to fill them, and the bees can be forced to work in any number at once, thereby greatly increasing the yield in short honey seasons.

7. It is the only hive that can be used angling and always secure straight combs, and can be made by any one who can use square, saw and hammer, and drive a nail.



8. Its facilities for breeding and for stimulating the queen to the production of brood ensure large, vigorous swarms at the honey harvest.

9. It is the only hive that saves bees from destruction, from falling on the snow on warm days of spring.

10. It is the best self-cleaning hive, and affords the best facilities for the removal of dirt.

11. The surplus honey can be had in boxes or sections, and can be taken from the top or side of the hive.

12. It is easier handled and moved than any other large exterior case in use, as the casket is removable from the case.

In brief, its combination will suit all tastes, as it has all the advantages without the imperfections of other hives.

JOHN M. PRICE.

Buffalo Grove, Iowa, May, 1870.

[For the American Bee Journal.]

Novice.

DEAR BEE JOURNAL:—We are sorry to inform you that our plans for 1870, as regards bees, are considerably marred by the disastrous fire which visited our town on the 14th of April. With the ruin of our store and business, our Quinby hive and a number of American hives, lumber, &c., which were stored in an upper room, were burned. And now, more than that, our bee-house, for want of a better place, is now used temporarily, as a receptacle for the tools, &c., saved from our manufactory. Well, to make the best of it, we are nearly as well off as far as facilities for the bees are concerned, as we were last year. Artificial incubation and many other matters, have to be laid "on the shelf" for the present.

We regret the loss of the Quinby hive, as we were quite anxious to test it; so much has been said on the subject, and one correspondent thinks

we were rather harsh in speaking of the "non-swarming boxes piled all around" arrangement of Quinby and Jasper Hazen.

We grant a great advantage there for box-honey; but cannot admit that one or two hundred pounds can be safely calculated on, by simply setting the bees to work in one corner of a "great barn," as Adam Grimm expresses it. And Mr. Hazen's reply to him was, in our opinion, nothing more than another tremendous puff for his hive, without noticing the main question at all. If Mr. Hazen had told us why his hive gave more honey than a two-story Langstroth, with brood in the middle of the lower story and empty combs or frames at the sides and on top, he would have given some light. We do not need to tell intelligent bee-keepers that more honey will be stored in frames than in small boxes; and so far as non-swarming is concerned, in Hazen's hive they *may not swarm*: but with Langstroth's hive and the melextractor we can be almost sure *they will not*. Now how is Hazen's hive to give Mr. Grimm four or five times the honey he gets now? We wonder if Mr. Grimm feels like burning up his hives and buying a right for the Eureka! Why not? Mr. Hazen gave him the figures! Supposing a swarm of bees inside of one of those piles of honey boxes should not start to work in the combs at all (see Gallup, pages 229 and 230, current volume) we suppose Mr. Hazen would pile on *more boxes*, and they would certainly then fill them *all*, as he seems to think that nothing else is necessary. And if they manifested an inclination to swarm, we suppose *more boxes* still would cure it.

Our experiments have led us to think that the kind of hive makes but little difference, so that the bees are properly protected while raising brood in the spring. With a small colony in the spring, we think something like Gallup's or the Economic Hive would be an improvement; but with a strong colony (and those are certainly the profitable ones) we think we can show as good a result with the Langstroth hive, as with any other. Should something like Quinby's be decided to be more convenient, then there is certainly that advantage; but no bee-keeper about here, who had ever examined our Quinby hive that was burnt, would for a moment think it easier to handle than the two-story Langstroth.

Dr. Conklin has sent us one of his Diamond hives arranged for the melextractor, with sixteen frames one foot square. We thought of making an Economic hive to test that form; but this comes so near it, we think it will answer every purpose for experiment. The arrangement to support the frames, we are quite favorably impressed with; but the way the honey-boards are put on, and the shutting of the hive, we fear will not work so smoothly when covered with propolis. His advice to *grease* the frames where we do not wish them to stick fast, is a novel idea to us. We shall try it.

Our queen, mentioned last month, with the small drones, *did* become fertilized. We first noticed her laying eggs on the 26th of April, and she has filled her hive with brood quite rapidly. As it was so late before she became fertile, there *may* have been other drones flying, though we had seen none among the Italians, which are always some time in advance of common bees, and are now coming out.

We omitted to mention some time ago that we had been experimenting on some substitute for a division board—something that would be warmer for small colonies, and that could be readily tucked up around them; and also for covering the holes or slats in the honey-board. We tried cloth, and finally cotton wadding in sheets, which is very cheap and warm. But the little chaps could not keep from pulling it in pieces and poking their heads out, so that it was very soon used up. We finally had some little quilts (or whatever you choose to call them) made, and they answer admirably. The bees cluster up close to them, and even gum them down to the frame; but they can be readily removed at any time. With a sewing machine they can be quickly made of cheap cotton cloth.

Apple trees are now in blossom, and our stocks are raising a large amount of brood and making active preparations for swarming, which we shall check in due time, as we prefer to manage that matter ourselves.

We mentioned a stock of hybrids last fall, that objected to being put into winter quarters. Well, in the fore part of April, we discovered them to be entirely out of honey, although they had an abundant supply, like the rest, in the fall.

Mr. J. H. Thomas says, if Novice had expended his two hundred dollars in a cellar, he would not have had to open doors at night, &c. Does he not forget that we were compelled to use *damp sawdust* (so much so, that this spring we found lumber placed in a loft quite damp and covered with mould); and that a dry cellar, in our locality, is something that we have been trying in vain to make. If we would change our bee-house, in any respect, it would be simply to make it larger. As for holes under ground, or below the surface, our experience has given us a prejudice against them. They are damp and mouldy, and hard to get into and out of.

On page 188, J. M. Worden says, there are two faults which all loose frames have. First, want of stability—being unfit for transportation. Our experience is as follows: We at one time bought six stocks of bees, in the fall, in Langstroth hives; put them in a lumber wagon without springs; and as it soon commenced to rain hard, we drove briskly three miles. Not a comb was broken, *nor a frame loosened*, although as they were new swarms, all the combs had been built that summer. We have given the matter nearly as severe a test several times since, with the same result, because bees *around here* brace their combs against each other, and fasten the frames all that is ever needed. The second objection is new to us, and may be right. He says: "In the best form of frame hives this loafing space amounts to one-fifth or one-fourth of their whole capacity." But supposing we did not give them this "loafing space," would they be sure to go to work? We fear they would not. When they loaf outside, we can manage them. Cannot some one get out a patent to squeeze the sides of the hive together, when it is desirable to have the bees go out and go to work? The idea

we give freely to those who are competent to develop it. As for ourselves, we are content still to take a back seat and look on, as should a

NOVICE.

P. S. A neighboring beekeeper has just made us a call, and speaking of Quinby's queen yards, says he tried three last year, but hybrids would swarm in spite of them. When they found the old queen could not go, they killed her, and raised young ones. The same thing has happened with us. When the ground is kept clear about the hives, and sawdust banked up to the entrance as we should have them, we cannot see much use in the queen yard. If the queen should crawl off we have always found enough bees following her, to find her easily. For the last two years we have, with the melextractor, prevented swarming *in every case when we wished*, without even taking the trouble to remove queen cells. As they were not allowed to get the swarming fever, we had no attempt at natural swarming, with one exception only, in that time.

P. S. No. 2.—Langstroth recommends, on opening a hive to set the combs in an empty hive, to keep away robbers, &c. We did this until we found it did not suit us, as many of the bees, especially the young ones, would get into the empty hive, and it was some trouble to dislodge them. In some cases, too, the queen got off the frames with a cluster of hybrids, and might in such cases get lost or be injured in shaking the bees out. Now we stand each frame on end against the stake that supports the grape vine we have before mentioned, and the young bees that fall off, get off, or are shaken off, for any purpose, have a smooth, clean, *sawdust walk* back into the hive. In using the melextractor, the bees are sometimes an hour or more in getting in; but we have never known them to fail, if grass and weeds were kept away. As for robbers, since our bees are all Italian, we have almost forgotten there are any, and scarcely take any precaution at all, now.

[For the American Bee Journal.]

Review of the May Number. Introducing Queens.

In reading over the discussion in the German Bee-keeper's Convention, I notice that Major Von Hruschka recommended a method of introducing queens, which in its general features resembles one practiced by me for over two years past, with uniform success in every instance; and which, in practice is, I think, more simple and easy than that recommended by the Major.

In answer to the request made by Mr. R. Wilken, on page 226, I will give, through the JOURNAL, the method practiced by me. Whilst pondering over the subject of introducing queens, I asked the question, "*How do bees recognize each other?*" All intelligent bee-keepers answer, "*By the sense of smell.*" Here we have the key at once. If we perfume a bee, away from its own hive, sufficiently to overpower its peculiar home scent, that bee will be treated like a robber on its return to its own hive. Again, in uniting bees, if both swarms, before uniting them, are perfumed so as to be of nearly similar scent (other conditions being right) they will never quarrel. Acting on this knowledge, I proceed as follows: I take the rose or jet of a common garden sprinkler, and fill it with a piece of sponge. I then prepare a mixture of sweetened water and *essence of anise*. I next set an empty hive beside the one which is to receive the queen, blow a little smoke into the stock of bees, open it; lift out successively each comb and the adhering bees; look for the queen, and gently sprinkle the comb and bees by dipping the sprinkler in the mixture, and hang the comb in the empty hive. As soon as I see the queen, I catch and destroy her. After all the combs are removed and sprinkled, I sprinkle the remaining bees and the inside of the hive. I then spread a sheet in front of the hive, lift out a comb, shake off the bees to the sheet, sprinkle them again, and replace the comb in the original hive. In this manner I treat all the combs and bees; take the Italian queen, sprinkle her with the same mixture, and drop her among the bees on the sheet; hive them like a natural swarm, and all is well. I did not introduce quite as many queens last season, as Mr. Wilken states in the JOURNAL, but I introduced nearly one hundred and lost not one.

PATENT HIVES.—REJOINDER.

On page 232, Mr. D. L. Adair, expresses himself in language which leads us to infer that he has the exclusive right to all frames constructed to form a chamber independent of the outer case. In making this statement he is probably not aware that the Champion Hive, is so patented as to clearly embrace that feature. Nearly all of these hives are made with their sides separated, and Mr. Adair has probably not come in sight of one of these double-sided hives. For the benefit of all interested, I give a few extracts from the specification of the patent. "The top bars K and the vertical pieces *m*, *m*, are made wide enough to have the edges of the several frames to touch each other, forming a second wall, or a closed side, independent of the case. These frames are constructed a little shorter than the interior space, of length and height of the case or body of the hive, so as to leave air-space between the case and the frames R." "Between the sides of the case and the frames, in the interior, I have a movable side board," &c. Claims granted: "The comb frames R, constructed and arranged substantially as and for the purpose described," &c. Any one wishing to see an exact copy of the patent, can obtain it from the Patent Office, No. 67,123—while Mr. Adair obtained his patent much later, No. 68,141.

STUPIFYING BEES.

I think that the use of chloroform on bees is very objectionable, since a little smoke properly applied, is sufficient to subdue the most vicious stock of bees, without injuring them in the least.

ALL ABOARD.

Friend Price must undoubtedly belong to the passengers of Train No. 2, with *mixed freight* and *sleeping* car, if he counts all bee-keepers that believe in tight tops and side-doors as among

"the Rip Van Winkles who have secured berths in the sleeping car to the end of the journey of life." Nearly half, if not more, of our most intelligent bee-keepers prefer side to top opening hives. It is not long since one bee keeper stated in the JOURNAL that many times he felt that he could take an axe and knock off a side. Dzierzon and Berlepsch, two of the most scientific bee-keepers of Germany, use to-day side-opening hives. In my apiary I have hives which open from the top only, and also some which open from the side and top both, and for my use I make no other than side and top opening hives, as I prefer them for the great convenience they give for the management of bees. When friend Price speaks of fixed frames, he speaks of something I do not understand. During my travels I have seen several styles of frames, but all were movable; and a *fixed* frame I have never seen.

I however agree with him on all the other points named by him; but those above referred to are undoubtedly placed on the wrong *train*.

E. KRETCHMER.

Red Oak Junction, Iowa.

[For the American Bee Journal.]

Systematic Plagiarism.

MR. EDITOR:—It is quite amusing to see the amount of "plagiarism" going on with the egotistical portion of the writers on bee-culture. I have read most of the new works now extant, and must say that nearly all of them are taken more or less from Langstroth's work, and some of them nearly entirely so. For instance, the Bee-keeper's Text Book, by King & Co., is nearly altogether copied from Langstroth's large work; and several others that I might mention are made up in the same manner. But the most complete and "double" plagiarism that I ever saw is in a little work by N. C. Mitchell, of Indianapolis, Indiana. He (Mitchell) says he acknowledges that he has not confined his work altogether to his own views, but has "drawn from the Mysteries of Bee-keeping by Quinby, Text Book by King & Co., and K. P. Kidder's work," &c. Now, if Mr. Mitchell is familiar with the rise and progress of bee-keeping in this country, he knows very well that the works he mentions have drawn more or less from Mr. Langstroth, and that without giving Mr. Langstroth credit. That is what I call "double" plagiarism. The great effort of such men seems to be to keep the name of Langstroth and his work entirely out of view. And I here venture the assertion that there is not now a single patent frame hive in existence, but partakes more or less of the Langstroth principle—the constant endeavor of the patentee being so to alter or change his hive as to seem to avoid infringing on the Langstroth patent. This is evident from the notorious fact that every patent hive of any note is undeniably modelled in some of its essential features on Mr. L.'s original invention. So, too, with the books. The effort of nearly every one of the compilers of these little "one-horse" books seems to be to keep Mr. Langstroth's comprehensive and invaluable work altogether out of sight. If they give anybody credit for their plagiarisms, they take special care it shall not be the one who deserves such credit, as in Mitchell's case. I was much amused this morning in reading an article in the Illustrated Bee Journal, from the pen of T. Clark Atkison, (May number, page 319.) The writer seems much pleased at the rapid progress of apiarian science, warns old fogies to get out of the way, and then to show the advance of the science, says there are at this time two Journals published for the benefit of bee-keepers—one, the Illustrated Bee Journal, by N. C. Mitchell, and the other, the Bee-keeper's Journal, by King & Co. There he stops, never once mentioning the AMERICAN BEE JOURNAL—the oldest and by a long way the best advocate of apiarian science. This is only another effort to keep out of view the pioneers in this cause, and puff into notice others who depend wholly for their existence on the continual bursting of little "gas bubbles," and bringing themselves into notice by blowing their own "horns." If ever there was a periodical sprung into existence by vanity, and kept alive by "gassing" and the most absurd assertions, it is the Illustrated Bee Journal. There is no end of the preposterous pretensions of the editor, and some of his correspondents partake of the same disposition. And if ever there was a catchpenny on any subject, the Bee-keeper's Journal, by H. A. King & Co., is one, beyond all doubt. At least such is the conclusion I am forced to come to, from a close perusal of the paper for a year.

I do like fairness and honesty in everything; and everybody that knows anything at all about the history of bee-culture in this country, knows that Mr. Langstroth is the great pioneer, and the inventor and first introducer in this country of the movable comb system, which has so entirely revolutionized bee-keeping; and that the AMERICAN BEE JOURNAL was the *first periodical* to advocate bee-culture as a business. And now that that business has so increased by numbers, through the exertions and influence of Mr. Langstroth and the editor of the AMERICAN BEE JOURNAL, that other papers can not only live but "make a large profit," such as the above described have sprung into existence, and in their self-conceit presume to ignore older and abler workmen. Is it so, Mr. Editor, that the two papers named are the only bee papers now published, or is the old AMERICAN BEE JOURNAL still alive? I trust it is, and will long continue to be.

B. PUCKETT.

Winchester, Ind., May 9, 1870.

It is observable that creatures nearest the earth are most greedy to accumulate. What creature stores up so much provision as the bee? But the birds of the air that fly next to Heaven neither sow nor reap, nor carry into the barn, saith our Saviour, "We are next to Heaven in profession, let us hate to be furthest off in conversation."—*Purchas.*

If a bee-keeper relies on natural swarming, his apiary should be carefully and constantly watched during the swarming, especially when after-swarms may be expected.

[For the American Bee Journal.]

Ventilation Again.

MR. EDITOR:—I am a constant reader of the "BEE JOURNAL and find a great deal of valuable information therein contained, besides some that I think not so valuable. Although my experience in bee-keeping has been somewhat limited, still I think I have gained some knowledge of the business, which may be useful to those who have had less experience than myself. I would not assume to teach any old beekeepers, but simply to throw out a few hints of what I regard as "sound doctrine."

I propose to say a few words on the subject of the *true theory of ventilation*, on which I am aware there is a wide difference of opinion. Some believe in abundant upward ventilation in winter; some in abundant ventilation from below; others, again, in little or no ventilation at all. Now, I conceive the great desideratum for successful wintering is, to *keep the bees as dry as possible*, still retaining all we can of the animal heat. If we accept this as our text, we have got a foundation upon which to build a true theory of ventilation.

I take it to be a fact that *dampness* is the great enemy to successful wintering, causing mouldy combs, fermentation of honey and pollen, disease, and death. There are two ways to dispose of this dampness; first, by *abundant upward ventilation*, second, by *ventilation from below*, with *absorbing* materials above. Now let us look at the merits of the two. In the first case, then, abundant upward ventilation may do very well, where bees are wintered in a special repository, like NOVICE's, described in vol. v. p. 131, and the requisite temperature is maintained. But for unprotected out-door wintering, it allows too much animal heat to pass off with the dampness, thus causing a greater consumption of honey, and perhaps starvation. In the second case, by ventilation below and absorbing materials above, we get rid of the dampness as effectually, as in the first case, while we retain nearly all the animal heat—supplying the bees with pure air, without a draft through the hive, which is unnecessary and should not be allowed in any case whatever, Therefore the second case has the advantage over the first, in retaining the animal heat, lessening the consumption of honey, and saving the lives of the bees.

In preparing bees for out-door wintering in movable frame hives, I would remove one frame, spreading the others somewhat to allow more room for clustering. Make a hole in the bottom board, equal to three or four square inches, covered with wire cloth on the inside for ventilation, as recommended by Mr. Cox, Mr. Quinby, and others. Then remove the honey board, and place in its stead some good absorbing material and non-conductor of heat, like paper, woollen cloth, straw, &c. I have a very favorable opinion of the paper quilt recommended by Mr. C. Hastings, BEE JOURNAL, vol. v. p. 44. I have used it this winter, to my advantage. Put the paper quilt upon the frames; make four one inch holes in opposite sides of the cap; fill the cap with good dry straw or hay, and put it upon the hive. Close the entrance to half an inch. Bees prepared in this way are in good condition for out-door wintering.

To winter in a special repository, give the ventilation in the bottom board; remove the cap, and place the paper quilt upon the frames.

I have drawn this article longer than I intended, and fearing that I may weary your patience, I will close with greetings to all my fellow beekeepers.

P. R. RUSSELL, JR.

Lynn, Mass., March 14, 1870.

[For the American Bee Journal.]

Great Fatality.

MR. EDITOR:—I heartily agree with Mr. Hardesty that all beekeepers give their experience in wintering as soon as the job is done. Loss in wintering is the great drawback in this locality. When my bees went into winter quarters, I was the possessor of forty-eight colonies. To-day I have but six still alive. Nine were in box hives, three miles from our village, on their summer stands; six died apparently of dysentery or bee cholera. The locality for bees is what I call a good one. Fruit blossoms and white clover quite plentiful. Basswood, whitewood, soft and hard maple, sycamore, elm, and all honey-producing trees, native to this country, in great abundance. Seas of goldenrod and boneset; also considerable wild sunflower, catnip, and (to top off with) a small field of buckwheat. All this forage is within three-quarters of a mile distance. Soil clay, land heavy timber, bordering on a large swamp, twenty miles long, and from one-half mile to three miles wide. Yard well sheltered.

These colonies were partly new and partly old ones. My home apiary consisted of thirty-nine colonies; seven in Langstroth hives (four of them shallow form, and three deep ones), and thirty-two in double wall hives with paper quilt (described by Charles Hastings) over them. These double wall hives are topbar hives, 13¼ inches square and 12 inches deep. About one-fourth of the bees were Italians and hybrids. Thirteen colonies were in a large, airy, and dry cellar, with temperature ranging from 35° to 40° F.; six were buried (on the Bidwell plan, below the surface, with no ventilation); and the rest remained on their summer stands.

The first to die was an Italian colony in the cellar, with pure queen purchased of Adam Grimm. The colony was strong in numbers, was in a shallow form Langstroth hive, and left about fifteen pounds of honey. The next was a colony of black bees, in the cellar and same kind of hive, leaving some honey also, the hive not being much besmeared. Next, I discovered seven colonies dead, out of doors; all were strong with bees, and left plenty of honey. The remaining ones were then (February 3d) put into the cellar, where they died off one by one, till only six were alive when set out on the 29th of March, and three of them have gone the way of all flesh since. Nearly all the hives and combs,

especially those that were left on their summer stands, were very badly besmeared. The bees were found dead in a mass, between the combs and on the bottom board. The six buried were in the same condition, except that the lower half of each comb was entirely ruined by mould.

The forage of these bees consisted of fruit blossoms and white clover, in great quantity, right at hand. No honey however on clover with us, as most other places, on account of continued rain. Basswood, whitewood, and other honey producing forest trees, one mile and a half distant. Goldenrod, boneset, and hoarhound, near by. Also, fifteen acres of buckwheat, eighty rods distant.

I can see no other cause for this mortality, except unevaporated watery stores. By the way, I notice some of these bees are voiding around the hives and on the alighting board to-day; some staggering as though crippled. Another thing new to me (as my experience is short) is a white sticky substance on the upper side of the abdomen, which in many cases pastes the wings fast, and prevents the bees from going to the fields. Has any one seen anything similar? Is it common, and does it come from a flower? It remains on them for days. Many are wandering around in the grass, trying to loosen their wings.

I would say for the benefit of Mr. Hubbard, that a farmer living one mile and a half from here, near a whortleberry marsh, had two sets of boxes (whose capacity is fifty pounds per set) on our hives, filled nearly full from whortleberry blossoms alone. This I witnessed.

I would like to have Mr. Gallup give his opinion of the mortality of bees in our locality, for nine-tenths of the bees within ten miles of here are dead. Apiaries of from fifteen to twenty stands are swept clean. I would like also to have him give us a *minute* description of his hives; how everything is arranged; what is the shape and size; where is the entrance; which way the frames run, how many, how large, &c., and the why's and wherefore's—remembering that some of us are only subscribers of 1870.

I think my next step upward will be from top bars to movable frames; but not until I have purchased a right to use them. I understand that Mr. Langstroth (the inventor, and I believe the father to all bee-hive inventors, when the truth is told) does not own the territory in which I reside.

And now, Mr. Editor, to close, I would say that I have had an invitation to join the Farmers' Club of this village, and talk to them on the subject of bee-keeping. I think I shall go and try to get up an interest. Shall I take my helpmate (the AMERICAN BEE JOURNAL), and read a few appropriate pieces therefrom to them—among them Mr. Newton's views of the Italian bee; pass round the Journal, and prove to them if possible, that it will not bite.

JAMES HEDDON.

Dowagiac, Mich., May 9, 1870.

The laws whereby the commonwealth of bees is ordered, are natural, not written in letters but engraven in their manners.—*Butler.*

[For the American Bee Journal.]

In the Dark Ages of Bee-keeping.

MR. EDITOR AND FELLOW BEE-KEEPERS:—As I am a constant reader of the Journal and a lover of the honeybee (the honey, of course, included) I think it my duty to write a few lines for its pages, while I profess that I have no axe to grind. I commenced bee-keeping in the year 1859, and have been trying to get up a large apiary. I started with one stand of bees in the old fashioned box hives; and it has been I and the moth for it, almost ever since, though I have overcome the scoundrels after a long struggle—but not until I left off using the box hive.

Before I used the movable comb hive, I had at different times as many as eighteen or twenty hives, all in excellent condition. Of course I looked for a large increase the following year, but when the year rolled round, I was doomed to disappointment, for all my bees were dead, except a few strong colonies.

My mode of getting honey to eat or for other purposes when wanted, was this: I got me a shovelful of live coals and a good roll of brimstone, stole upon my bees at night, and smoked them to death in a short time. I thought I had a lot of as good honey as any man, and that I understood as much about raising bees as most of them. You can imagine what a flavor my honey had. It makes me shudder to think of such a dish now. But we will class that as pertaining to "the dark ages."

I have my first hive of bees yet, and have never realized a copper from them, in honey or anything else, except a few swarms every year. In the year 1868 my eyes were opened, for I had then the pleasure of seeing something wonderful, as I thought—a patent hive! Of course I went in for one of those "tricks," for I thought that with it, I should have bees and honey both, without any trouble. The first swarm that came forth that spring, I placed in the new wonder;—and the bees seemed to labor so industriously, that I went to work and had more hives made; and now my apiary is increasing very fast.

My bees stood the past winter very well, and came out in the spring in excellent condition. I have got one new swarm this spring. Who can beat this?

I should like to ask friend Gallup a few questions through the Journal, as he is well posted in bee matters. When is the right time to feed, in fall or spring? And what kind of food is best? Which is the best kind of hive to use, and where can it be got? And which is the best way to winter bees, in the cellar or the open air?

Now, hurrah for the AMERICAN BEE JOURNAL. May it yet be found in the family of every bee-keeper!

T. WOODY.

Pleasant Valley, Mo.

In some locations and seasons, either from long and cold storms, or from deficiency of forage, stocks that are not well supplied with honey will exhaust their stores and perish even in May, unless they are fed.

[For the American Bee Journal.]

Cheap Paint for Hives.

MR. EDITOR:—Noticing in the BEE JOURNAL an inquiry for a cheap and useful substitute for lead and oil paint, I will give the following:

Take half a bushel of nice unslacked lime; slake it with boiling water, covering it during the process to keep in the steam. Strain the liquid through a fine sieve, and add to it a peck of clean salt previously well dissolved in warm water; half a pound of powdered Spanish whiting; and a pound of clean glue previously dissolved by first soaking it well and then hanging it over a slow fire in a small kettle, within a larger one filled with water. Add five gallons of hot water to the whole mixture; stir it well, and let it stand for a few days, covered from dirt or dust. Apply when hot, by keeping it over a fire.

Spanish brown stirred in will make it red or pink, according to quantity. Lampblack and Spanish brown makes a reddish stone color.

It is quite a chore to prepare this properly, but when it is ready you have an article that is hard to beat.

P. YOUNG.

Sharon, Wis.

[For the American Bee Journal.]

A Cheap Paint.

MR. EDITOR:—Several correspondents having called for a paint receipt, the following from the Florida Land Register, may answer their purpose.

DURABLE WHITEWASH FOR OUTSIDE WORK.—Take one bushel of lime, mixed as usual for whitewash; then add and thoroughly mix twenty pounds Spanish whiting, seventeen pounds rock salt (Liverpool salt) twelve pounds brown sugar. Apply thin, three coats, and it will remain longer than white paint, will not wash off, and cannot be rubbed off.—SOLON ROBINSON.

Mix in colors to suit.

JOHN M. PRICE.

Buffalo Grove, Iowa.

[For the American Bee Journal.]

Cheap Paint or Whitewash.

MR. EDITOR:—In the February number of the Journal, Mr. Coggshall makes inquiry for a cheap paint.

Take fifty parts of white lime, six parts of alum, twenty-five parts of curd cheese, made from sour milk, and add a small portion of blue vitriol.

The milk should not be heated very hot, or the curd will be too lumpy. Mix all together, and run it through a paint mill, and it is ready for putting on. You can apply it with a paint brush or a whitewash brush. Add any color you wish, when you are ready to apply it; or you can take a little linseed oil and white lead, and add different colors and apply a coat on the above paint, especially in front of the portico, so that the fronts of your hives shall be of different colors.

When the above paint is mixed ready for the paint mill, thin it down with sour milk to the proper consistence of whitewash. Keep your hives covered and it will last several years. The bee-moth is not apt to deposit eggs in the cracks or crevices of hives, if filled with this paint. The vitriol kills the larvæ.

This whitewash is good to put on any outbuildings. It preserves the boards from warping or cracking in the sun, better than white lead and linseed oil will.

ALFRED CHAPMAN.

New Cumberland, West Va.

[For the American Bee Journal.]

Ventilation.

MR. EDITOR:—I would like to be informed, through the columns of your interesting Journal, what constitutes proper ventilation. There is such a diversity of opinions, and so many ways recommended, that one with little experience is perplexed as to what mode to adopt. Some tell you that the summer passages must be kept open or the bees will smother. Others say that they should be closed, to give a chance for the dampness to pass off at the top of the hive. Now, if there is danger of suffocation with the summer passages closed, how is it that many beekeepers in this vicinity, as well as in other places, who do not see their bees from fall to spring, permitting the snow and ice to collect around the entrances, still do not lose their bees?

Some say there should not be a current of air passing through the hive. Now, I would like to ask, will there be a current passing through the hive, if the summer passages are open, and two or three thickness of woollen cloth, or a good covering of shavings, be placed over the frames, after the honey-boards are removed? And, also, does a hive need upward ventilation in the height of the breeding season, if it is shaded from the hot sun?

Will any of our friends give us some light on this subject, pointing out briefly and plainly what is and what is not required according to season and circumstances?

A. GREEN.

Amesbury, Mass.

Evidently there does exist a line of demarkation between distinct species, which only requires to be diligently sought to be found, obscure as it may appear to be, but which the insects themselves obey; for however closely species may seem to approximate, yet I do not believe that they ever permanently coalesce, but that they are always as distinctly separate as are assymptotes. —*Shuckard.*

The study of natural science has progressively reached an extraordinary development, spreading in every direction its innumerable tentacula; to which the perfection of the telescope and of the microscope have still further added, by the discovery of new worlds of wonder.

[For the American Bee Journal.]

The American Hive.

Will some one who has had more experience in the use of the above-named hive than I have, please tell me how *to see* if the bees in them have sufficient stores to carry them through to the spring, without taking out all or half of the combs?

I am led to make this inquiry from the difficulty which I had a few days ago, in ascertaining the condition of a hive belonging to a friend. He has three hives. One a box hive with a movable cover to the honey chamber; one a shallow Langstroth; and the other an American. On removing the cover of the box hive, I could get a tolerably good idea of its condition; and by separating the combs of the Langstroth hive, I could at once see both the amount of honey it contained, and the size of the swarm. But the American was entirely beyond *me*. The top presented nothing but the solid tops of the frames, with about two by one-half inches cut out, for the bees to pass through to get to the surplus boxes; so I could see nothing from there. I then took off the movable side, but could only see one side of one comb. When I attempted to take out the comb, I found the frame glued fast, with propolis, all along the top; as are all the rest. Having nothing at hand to separate them with, and having very little time to spare, I was obliged to give it up. Separating these combs would have been a very small matter in this one hive; but I should be very sorry to have to do it to all the hives in my own yard, before I could ascertain their condition in the spring.

D. M. WORTHINGTON.

Elkridge, Md., April 13, 1870.

[For the American Bee Journal.]

A New Moth-trap.

As the season is near at hand when that great pest of the apiary, the *Bee-Moth*, begins its untiring work of depositing eggs in every suitable place, I deem it advisable to put all on their guard, so that, if possible, they may baffle this foe in some of its manœuvres.

The following is an excellent moth-trap, which every bee-keeper would do well to put in operation as early in the season as the moth begins to be troublesome.

Take common glass quart fruit jars, "the more the merrier," fill each two-thirds full of water well sweetened with honey, molasses, or sugar. Tie a string around the neck of each jar, and suspend from the limbs of fruit or other small trees near the hives. In the evening the moths or "millers" are attracted to the sweetened water in great numbers, and when once in seldom succeed in getting out.

I first saw this method practiced at the apiary of a friend a few miles from this place, last season. The top of the water was completely covered with moths and flies; and he assured me that he was obliged to empty the jars, at least every other day during the summer months, as they would get so full that there was no chance for more to drown.

One moth thus killed in May or June is equivalent to hundreds of worms a few months later. See to it then that as many are early destroyed as possible.

The bees will never trouble these jars when there is honey in the fields.

I. F. TILLINGHAST.

Factoryville, Pa.

[For the American Bee Journal.]

To Keep Bees from Swarming.

MR. EDITOR:—In volume 4, page 185, Mr. Quinby describes a box for preventing the queen from escaping.

I am sorry to say I cannot understand fully what is intended. Where is the box placed? It appears it has been understood, for at page 119 of the present volume, Mr. A. C. Manwell says, "it works like a charm." Will some one please to explain how it it is used?

TYRO.

Ontario, Canada, Feb., 1870.

Honey Emptier.

A correspondent of the Journal of Agriculture, writing from Springfield, Ill., says:

"Our first swarm, hived May 22d, 1869, stored in boxes, making all the comb, one hundred and ninety-two pounds of honey. This has been removed as fast as the boxes were filled. The hive now contains forty pounds net of honey, some ten pounds more than it really needs for wintering well, showing that the bees did not rob themselves to store in boxes. They are half-breed Italians, and when hived were supplied with three frames of comb. Other hives have given us from seventy-five to one hundred pounds, while some of our hives were so full in the early part of the season that there was but little room for the queen to breed, and consequently were deficient in bees to store honey. Many of these hives were relieved of their surplus honey with the honey-emptier, and they are now strong hives. This honey-emptier is a great addition to an apiary. In fact, I should hardly be willing to do without one, though as generally made they are quite deficient. Being made of wood they absorb honey which is apt to sour in warm weather. They are also made with flat bottoms. Seeing these imperfections led us to get one up ourselves, with which we are pleased. It is made of tin, with the bottom sloping to the centre, where the honey is drawn off through a tube, so that all of it will run out and none be wasted. This makes it convenient for throwing out small lots of honey, as every drop of it will run to the centre, ready to be drawn off when wanted. S. C. F.

Springfield, Ill.

Bees gorged with honey never volunteer an attack.

THE AMERICAN BEE JOURNAL.

WASHINGTON, JUNE, 1870.

☞ With this number closes the fifth volume of this Journal. Though it is gratifying to us to be able to say that the volume ends with a largely increased subscription list, it is nevertheless true that the bee-keepers of the country have not, thus far, sustained our effort to establish an organ of communication for the common benefit of those interested in bee-culture, as generally and as generously as we presumed they would when we engaged in the enterprise. Though the Journal now does somewhat more than pay cost, our aggregate expenditures for its support since its commencement largely exceed our total receipts, regardless of time and labor devoted to the work. Of this, however, we have not complained, trusting that, in due season, our services and efforts would be properly appreciated in the quarters to which we must look for encouragement and remuneration. With increasing patronage, we have steadily enlarged and improved the Journal; and it is our constant endeavor to make it keep pace with the progress which the specialty to which it is devoted is continually making at home and abroad. But to improve the paper to the extent we contemplate, and publish it as frequently as its steadfast supporters desire, demands more ample fostering aid than we have yet received. Give us *that*,—give it right speedily, and the AMERICAN BEE JOURNAL shall soon be made all that its warmest friends wish it to be, without deviating an iota from that *impartiality* and *fair dealing* which have always been among its prominent characteristics. Will our friends assist us in the effort to increase its circulation? Each can do much in its behalf, in his own immediate neighborhood, by presenting it to the notice of practical bee-keepers who are not yet numbered among its patrons. Those who have already done so, have our cordial thanks for their kindness.

The carrying in of saw-dust for pollen, as noticed by Novice, was observed many years ago in Germany, and occasionally in this country; but appears to have been practiced this spring, more generally than usual here, by the bees, especially in the west and southwest. To what extent, or how, it can be used by them, as a substitute for the pollen of fruit blossoms, remains to be ascertained.

In the Bienenzeitung, vol. 6, No. 20, for 1850, Mr. Scholtisz stated that he saw his bees carrying pellets formed of *charcoal dust*, which were black as jet, and had a sweetish taste—the dust having evidently been slightly moistened with honey.

The plant mentioned by Mr. Argo as springing up in a vineyard and furnishing early pasturage for his bees, and of which he sent us a specimen, is the *Lamium* or dead nettle; but whether the *stem-clasping* or the *purple*, the specimen did not enable us to determine—probably the former, as the latter is comparatively rare. It is a good honey plant in its season, but otherwise a worthless weed, introduced from Europe, and not easy to extirpate when it gets a foothold. It is an annual, quite hardy, often blossoms in mid-winter when the weather is mild, and seeds profusely. The pollen gathered from the flowers is orange colored.

Bees' Metamorphoses.

According to recent careful observations made in Switzerland, the development of queens, drones and workers proceeds as follows, in the ordinary temperature of the hive in spring and summer:

The egg hatches on the third day after being laid. The queen remains in the larval state, in the open cell five days; the worker five days; and the drone six days and twelve hours. In spinning the cocoon, the queen spends one day, the worker one day and twelve hours, and the drone three days. After spinning the cocoon the queen remains a larva two days and sixteen hours, the worker three days, and the drone two days and twelve hours. After changing, the queen remains in the nymph or pupæ state four days and eight hours, the worker seven days and twelve hours, and the drone nine days. Hence, from the capping of the cell to the issuing of the bee, the queen usually requires eight days, the worker twelve, and the drone fourteen days and twelve hours; making from the laying of the eggs to the emerging of the perfect insect, the normal period of sixteen days for the queen, twenty for the worker, and twenty-four for the drone. This period, however, is occasionally hastened or retarded by the peculiarly propitious or unpropitious state of the weather or the temperature of the hive; and the term has been found to vary,

In the queen,	from the	15th	to the	23d	day.
" worker,	"	19th	"	26th	"
" drone,	"	23d	"	28th	"

Attaching Guide Combs to Frames or Bars.

COTTAGE CHEESE CEMENT.—Dissolve one ounce of borax in six ounces of water, and use the solution for mixing with curd or cottage cheese to reduce it to the consistence of paste. Spread a thin layer of this on the surface of the frame or bar to which the guide comb is to be attached; cut your comb into strips of about one-inch in width, and press these gently on the paste, lengthwise of the frame, from end to end.

Set the frame aside in an airy place, in the shade, to let the cement dry.

GUM ARABIC CEMENT.—Dissolve gum arabic in water, to a syrupy consistence; cut your comb into strips, and proceed as above directed. Good clean glue may be used for the same purpose. There is no danger that the cement will become softened by the moisture of the hive, as the bees will immediately fasten the comb more securely, if need be.

It is well to prepare frames thus with guide combs, at leisure moments, some time before they are likely to be wanted. After the cement has become dry, insert the frame in one of your strongest colonies, and let it remain there twenty-four hours. In that time the comb will be properly fastened and trimmed up in workmanlike manner, and the frames should be removed for preservation and use. A plentiful supply of frames thus furnished will be found very convenient and serviceable. They can be preserved from the moth and the worm by suspending them in a box, and occasionally exposing them to the fumes of burning brimstone—which is the only use that should ever be made of that commodity, in an apiary.

Ignorance not Bliss!

A correspondent of a Western paper, giving an account of his perambulations in the "rural districts," says—

"We called at the residence of Mr. R—, who had been confined to his room and bed for three weeks. His affliction was severe, and all occasioned by the *stings of bees*. The way it happened was this: One hot day, while the men were in the hay or wheat field, a cow came near to where the bee-stand was, and it seems the honey-making family had a dislike to *Old Horny* coming so near, they mounted the cow, not only by scores but by hundreds, and tormented and stung the poor brute so severely that Mr. R. was compelled to go and try to relieve her from the bees, or rather the bees from the cow. And no sooner had he made his appearance in behalf of *sookey*, than the bees mounted him and stung him most unmercifully. The result was his face and body began to swell from the poison, so that in fact at one time it was thought his life was in danger."

Certainly this was altogether a sad occurrence; but had Mr. R. been a reader of the BEE JOURNAL, and *remembered what he read*, we think it likely he would have been spared all this suffering and confinement. By immediately spreading a blanket or linen sheet, "dripping wet," over the cow, and keeping it wet, he would quickly have *relieved* her, without probably receiving a sting himself. And if, in their fury, the bees had assailed him also, the prompt application of coal oil, or recourse to friend Gallup's "water cure" would in all likelihood have averted the consequences from himself.—People who keep bees in these days, hardly have an excuse for not knowing how to treat them in such emergencies.

Hiving under Difficulties.

Natural swarms will sometimes alight in nearly inaccessible places, as in a dense hedge, or in a gooseberry or currant bush. When this is the case, take an empty straw or box hive, with its bottom board, and place the latter as near as possible to the cluster, so pressing it in the soil that bees cannot get under it. Then with a long-handled spoon or dipper scoop up a parcel of bees from the cluster, transfer them to the bottom board, and immediately invert the hive over them, with the entrance towards the cluster. Transfer some more bees to the front of the hive, and they will immediately commence fanning and humming. If the cluster cannot be reached with spoon or dipper take a long stick or paddle, besmear one end of it with honey or sugar syrup, insert it in the cluster, let bees gather on it, and shake them off on the bottom board or in front of the hive. Now take a fumigator and blow tobacco smoke *gently* on the cluster, *from above*, to alarm the bees, which hearing the humming and finding their lodging getting uncomfortable, will soon descend to the ground, travel to the hive in regular troop, and take possession without hesitation. Let them enter without further annoyance from smoke; wait till you are sure the queen is with them, if you have not seen her travelling along in the crowd. If they remain quiet and content for half an hour, remove them to your apiary and transfer them to a movable comb hive. Q. E. D.!

Worse than Foulbrood.

The correspondent before referred to says he too could write a chapter on bees, as he has considerable experience in the bee business. Though he knows not much about being severely stung, yet he "*knows something about money-making over the left.*" He once bought forty-five colonies of bees, hauled them home into his yard, had a house put up; and "the result was every pound of honey cost me over three dollars, and in a few years I had not a sting or a bee left. There the old boxes and deserted hives stood. It seemed as if every calamity that bees are subject to, came over my bee family, and I was minus $300."

Now, we fancy that any "new beginner" who would go into the "bee business" in that style and on that scale, would be quite likely to find himself, in a few years, suffering from precisely such a calamity. No doubt the writer was pretty severely stung on that occasion, and we suspect he has not yet got entirely over the pain or the swelling.

That Bee Hive Case Again.

At the late session of the United States District Court, at Milwaukie, the Grand Jury found an indictment against K. P. Kidder, for perjury in the Bee Comb Guide Case of Kidder vs. Trask, about which we have had occasion to remark more than once. —*Western Farmer*, Madison, Wis.

Correspondence of the Bee Journal.

WICKHAM-BREAUX, ENGLAND, March 30.—Bees did very poorly in this country, last summer. Most bee-keepers lost half their stocks during the winter, and those still alive are scarcely out of danger.—W HEWSON.

FULTON, ILLS., April 20.—The bees in this section have generally wintered well. They have been carrying in pollen for a week or ten days, when the weather would admit of it. The soft maple and the elm are in bloom; also the hazelnut and poplar.—R. R. MURPHY.

BROOKLIN, CANADA, April 29.—The spring so far is backward here. There was a fearful loss of bees during the winter, owing to a want of honey. Last season was so extremely wet and cold, that very little honey was stored. I think fully one-third, if not one-half, of the bees have died in this province.—J. H. THOMAS.

MOBILE, ALABAMA, May 7.—The season here has been in many respects remarkable. Bees commenced obtaining pollen about the middle of January, and began breeding very rapidly. Many stocks, well supplied with honey, exhausted all their stores by the 1st of March. The spring was backward—nearly twenty days later than usual. Consequently stocks had to be fed not only to prevent a cessation of breeding, but actual starvation. It continued thus until Tuesday the 12th of April, when they commenced obtaining honey, which, though very thin and transparent, was so abundant that on Friday evening, the 15th—or in three days—some stocks that were fed on Monday to keep them from starving, contained fifty pounds of honey. In a few days more honey from the blackberry blossoms became abundant, and has so continued ever since. The amount of honey collected within the last three weeks is without a precedent in this locality.—In order that I might the easier Italianize my apiary, I reduced the number of stocks and permitted no swarming; consequently all my stocks were strong. I am not yet prepared to state the exact amount of honey obtained within about three weeks, but some stocks have certainly collected one hundred and fifty pounds and made two-thirds of the comb to store it in. Every young bee that emerges from its cell, has its place at once supplied with honey, hence I have never known a season in which the melextractor was more necessary.—J. M. WORDEN.

KNOWERSVILLE, N. Y., May 9.—The last season was a poor one for bees, in this locality. The Italians proved their superiority beyond a doubt—swarming and storing surplus honey, while the natives were doing comparatively nothing.

This year the season opens with better prospects. The plum and cherry trees are in full bloom, and the bees are improving the time.

I like the BEE JOURNAL very much. I wish it came weekly, instead of monthly. I have used some of NOVICE'S bee-feeders and like them very well.—W. D. WRIGHT.

WENHAM, MASS., May 10.—In the May number of the Journal I find another communication from Mr. D. T. Batcheldor, of Newburyport. Now as I very much dislike to be made out a liar, as Mr. B. would make it appear, I mean to show proper resentment, and shall try to turn the tables on Mr. B., which I think I can do, as I have plenty of evidence to prove my statement was correct.

I can prove by the "*Honey Committee*" that my statement in the February Journal, page 196, is true in every sense of the word. I was present in the room when the Committee made up their awards, and know whereof I speak. I say again that Mr. D. T. Batcheldor was awarded only two dollars on his bees, and his brother, D. C. B., was awarded a like amount.

I know, Mr. Editor, that this correspondence is not very interesting to many of your readers, but while I am about it, I would like to have it known how it was that Mr. B.'s bees did so well. That hive of bees had been in my care for several years. They were in a hive that I devised (except the movable frame principle). They were transferred into it by me; and, in fact, it was about the same thing as taking one of the best stocks of bees from my apiary. Now he has come out in the BEE JOURNAL, boasting how well his bees have done, and intimating that he beat friend Alley and two or three other old bee-keepers—new style of hive and all; and all this with only *one* year's experience! What a wonderful head that man must have; why I should think he would have the headache all the time.

Mr. B. says he has not seen Mr. Noyes, of Seabrooke, "where friend Alley has been inserting queens, dividing swarms, &c." Well, now, I have seen Mr. N. and will say, for the benefit of Mr. B., that Mr. Noyes had one stock of bees in the same kind of hive and they were only two miles from Mr. B.'s apiary. They stored one-third more honey last season than Mr. B.'s did, in the same kind of boxes. And what is still better, I have seen Mr. N.'s bees this spring, and the one stock alluded to is worth more than both Mr. B.'s. Mr. Noyes is an old bee-keeper, and friend Batcheldor cannot expect us old bee-keepers to make our bees do as well as his. I suppose we haven't got the "backbone and cranium." I will say, however, that Mr. Noyes has had excellent "luck" with his bees up to the past winter, and is satisfied with what his bees have done—having done as well as the average.—If any one informed Mr. B. contrary to the above, I can only say that they knew nothing about it. I will add also that I never divided more than one hive of bees for Mr. Noyes, and that was four years ago.

Mr. B. says his brother told him, within one month, that his bees did not store as much honey as I stated (forty pounds) "by more than one-quarter part." All I have to say about this is, that I have seen that brother within three days, and his word is my authority, and he says he told his brother no such thing. Mr. B. also states that his brother had old comb in his boxes. I am inclined to think Mr. B. is mistaken about this, from the fact that I put all the comb in those boxes, and the whole put together would not have filled six of the boxes. I merely put in a small piece of guide comb, to induce the bees to go into the boxes and commence work. I have recommended this same thing in the BEE JOURNAL some time ago.

I stated that, "on the first day of June one of the combs in the brood box broke down and destroyed more than two quarts of bees." Mr. B. thinks this part of the story intended as an advertisement for my hive. I will remind him that he can find my advertisement concerning my new hive in the advertising columns of the BEE JOURNAL. I believe I did not commence to advertise my hives until I had made and tested it. Neither did I give notice through the Journal that I had a wonderful hive ("different from any other") that I would describe in the Journal as soon as I had "proved it."

I think I said that Mr. D. C. Batcheldor had received two dollars for his bees. What I intended to say was that he was *awarded* two dollars. I may add that he has not yet called for his money, but intends to do so as soon as convenient.

Now, friend B. when you write again tell us something more about that "backbone;" and if you can as

well as not, say something also about that "cranium." This barking up the wrong tree is bad business; but when a fellow gets into such courses it is best to try and get out again.—

I annex a communication from the Chairman of the Committee on Bread and Honey, at the Essex County Fair last autumn, concerning the awards made by that Committee.—H. ALLEY.

NEWBURYPORT, MASS., May 3.—MR. EDITOR:—My attention has been called to an article in your February number, page 172, from Mr. D. T. Batchelder, and also one in reply in the March number, page 196, from Mr. Alley, and again to another from Mr. B. in the May number, page 242. As these contradict each other, I thought I could set the matter right by a simple statement of the facts.

Mr. B. says he took his bees to the county fair, and there obtained the first premium of four dollars. This is a mistake. No *premium* was ever offered by the Essex Agricultural Society for Bees or Honey. A sum of money is placed at the disposal of the Committee on Bread and Honey, to be awarded in GRATUITIES, as the articles offered may seem to merit. At the fair in Newburyport last September, of which Mr. B. speaks, there were four entries of bees, viz; D. T. Batcheldor, D. C. Batcheldor, Mr. Alley, and Mr. Green. The Committee unanimously awarded to Mr. D. C. Batcheldor a gratuity of $2; to Mr. D. T. Batcheldor a gratuity of $2; to Mr. Alley and Mr. Green $1, each.

The Committee made an official report in accordance with the above statement. It was published in the Newburyport Herald and the Society's Annual Report: and Mr. D. T. Batcheldor has simply obtained $2 which belong to Mr. D. C. Batcheldor. Of course I do not know whether an error occurred in copying the report of the Committee for the City Treasurer, but if there was such an error, it does not alter the fact that Mr. D. T. Balcheldor did not obtain the first premium, because they were no premiums given; and that Mr. D. C. Batcheldor was awarded an equal gratuity with Mr. D. T. B. admits of no question. The Treasurer of the Society is officially authorized to pay premiums and gratuities; but by permission of one of the officers, the City Treasurer was last year allowed to pay the small premiums, &c. He, being unused to the business, perhaps made a mistake; but, whoever made it, the mistake should be rectified.—EDMUND SMITH, *Chairman of Committee on Bread and Honey, for Essex Agr. Soc.* 1869.

EAST SAGINAW, MICH., May 14.—Almost all the bees in this part of the country are dead. I think it was owing to the watery honey gathered late last season. The weather came on cold before they had time to evaporate the water and cap the cells.—Bees wintered in the cellar did not do as well as those out of doors. There is not much to brag of, as nine-tenths of those outside were lost. I have counted up three hundred swarms that perished, in this vicinity, during the winter and spring. One man lost fifty swarms in his cellar (all he had); where heretofore he wintered them successfully.—L. C. WHITING.

JEFFERSON, WIS., May 17.—My bees came out of the winter very weak and poor. I lost not less than seventy-one colonies out of the six hundred and seventy, which I wintered in. The survivors, where not too weak, are gaining rapidly.

I had better luck this spring in getting young queens purely fertilized this spring, than at any time during the last five years. I have about twenty laying now, and nearly as many more that are from three to six days old.

After learning how black bees came out in this country I have again changed my mind about their being hardier than others. Almost every keeper of black bees has lost nearly all he had. I have only three colonies alive, and these are properly black hybrids.

To make it appear that my prices are as low as those of any other breeder, I have concluded to send off young queens about three days after they commence laying. In my own apiary I had but few hybrids last summer, and will have less this summer; and as no black colony is alive around me now, I can easier furnish two queens without testing, than one with the trouble of testing her.—In my southern apiary, I expect some young swarms within a week from now; but not any at home within a month, if then. All blossoms seem to have honey this season. Some colonies, in my southern apiary, have as much honey now, as they had seven months ago.—ADAM GRIMM.

Erratum.

MR. EDITOR:—In the May number of the Journal, Mr. Wm. M. Stratton corrects the figures, as published, in an article I sent you on Alsike clover. Not having seen the article since it was sent you, I was not aware that it was published. It should read 346,154 bees per acre, or 2,162 per square *rod*, or 8 per square foot. If I remember rightly it was so written, and the mistake is in the copyist or the typesetter. The figures, however, are not exact; fractions are omitted. But they are sufficiently correct to serve as an illustration, and to show that the keeper of a large apiary, who grows any honey-yielding plant for bees, with the expectation of being perceptibly benefitted by it, must cultivate it on an extensive scale.

J. H. TOWNLEY.

Parma, Mich.

[For the American Bee Journal.]

Paper as a Non-conductor.

I would say to Mr J. L. Way that I have tried the Paper Hive, with five thicknesses of paper, one fourth of an inch space between each paper. It was calculated to absorb all the moisture of the bees, and not mould or get damp; and that the bees would winter safe on their summer stands. So I was ready to try one swarm. A friend gave me the hive, and I gave him five dollars for the bees that were in the hive, and brought it home. Before the middle of January my bees were all dead. The paper was damp and mouldy, and all gave way in small pieces. Thus I found that paper was of no account. The hive was Cox's patent. I have used nine different patented hives; and all but two proved to be worthless. I have bought wit very dear!

Bees have done very well here since the first of January. Before that the weather was too wet and cold.

Now, Mr. Editor, if you think this worth an insertion, use it. I hope we shall get the Journal semi-monthly soon. I think we could not well get along without it, as it is. Every bee-man must have it.

W. ROWLEY,

Minn. City, Feb. 23.

England uses two thousand tons of beeswax per annum, valued at $2,000,000.

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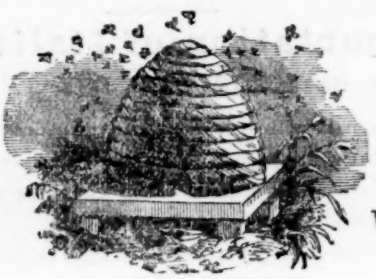

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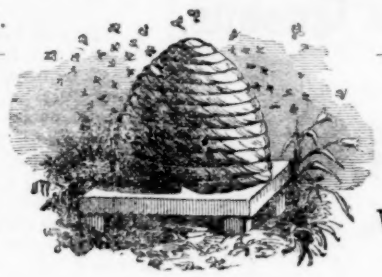

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